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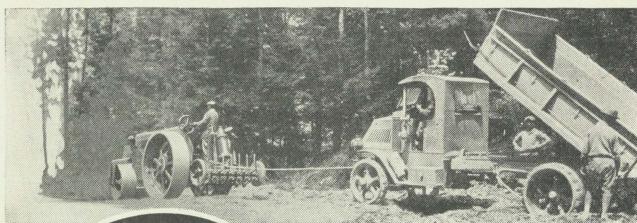
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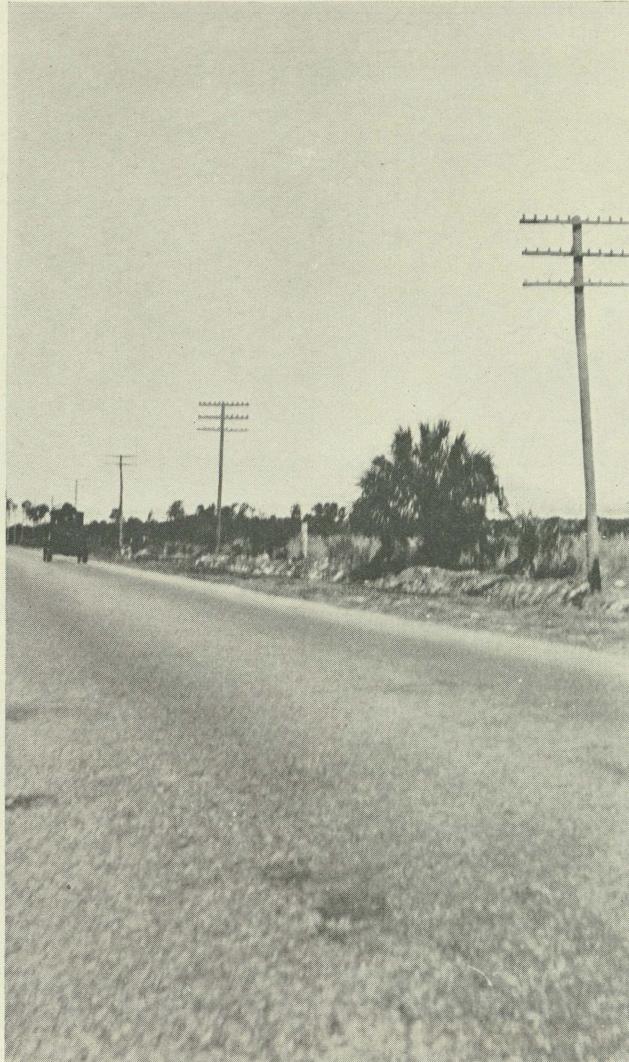
TAMPA

JACKSONVILLE

MIAMI

FLORIDA

Vol. V
No. 3



Project 570, Manatee County.

HIGHWAYS

MARCH,
1928

The Tamiami Trail

By Horace A. Dunn

ACKNOWLEDGING but one superior in world roads and surpassed in durability of construction and excellence of engineering by none other than that most famous of Roman highways, the Appian Way, hailed as the most outstanding engineering accomplishment of the ages, the Tamiami Trail, Florida's widely heralded cross-state highway loop, will be travelable to automobile traffic before the middle of this year.

Work on the greatest of American highways, the construction of which caused the State of Florida to unyoke its financial resources, is being rushed to completion and latest reports from the contractors indicate that the two ends, one extending from the town of Everglades on the west coast and the other from Miami on the Atlantic side of the peninsula, will be joined in April of this year.

The linking of the road will mark victory for engineers and road builders who were scorned in their early attempts to conquer the vast wilderness of the Florida Everglades, for the trail, a standard 40-foot highway, penetrates the very heart of America's last frontier and passes through the dense

wilderness known to the native Seminole Indian as Pah-hag-o-kee, or the "grassy water."

With the completion of the grading of the highway the State will have accomplished the most difficult and perplexing task in its hectic road building history. There is no other highway in the world which called for more eminent engineering ability, while it has been admitted that Appius Claudius, the great Roman censor who started the construction of the Appian Way from the gates of Rome to the sea in 312 B. C., would have thrown up his hands in despair had he looked upon the uncharted territory of jungle waste which the Tamiami Trail was destined to traverse.

Engineering brains were puzzled and some of the most prominent figures in the profession declared emphatically that the building of the highway through the Everglades would be a physical impossibility. The famous exploration of the Tamiami Trail blazers, made in 1923 when a group of fearless men marked the way from Tampa to Miami in a perilous journey through the swamps and marshes of the Big Cypress, was the starting point; the spark which kindled into a blaze of activity and finally resulted in the appropria-



Project 614, Road 5, Sarasota County—Eight-inch Lime Rock base, three-inch Topeka Type surface.

tion of State funds in tremendous amounts for the building of the trail.

Dr. Fons A. Hathaway, chairman of the State Highway Department, realized that the building of the trail would be a very expensive project, and when instructed by Governor John W. Martin to carry on with the work he replied that he would as long as the State treasury held out. The Tamiami Trail, while recognized as the Appian Way of America, called for the expenditure of several millions of dollars and will be listed as one of the most expensive road links in the country.

Despite scoffing on the part of some engineering authorities and many citizens who looked on the undertaking with a skeptical eye, State officers in co-operation with such men as Barron G. Collier, leader of all Florida developers and one of the State's largest taxpayers, determined to build the trail and conquer the Everglades with engineering brains and man power. That was a little more than three years ago. Today finds the objective nearly reached with giant dredges splashing and ploughing their way to throw up the rock road base in the very heart of the jungle. There is a gap of only 16 miles remaining until the trail will be linked. The rest will be easy for with the fill completed the surfacing and top dressing can be quickly applied.

Since Chairman Hathaway recently compared the Tamiami Trail of Florida with the Appian Way of Italy, it has been found that in many respects the

trail resembled the famous Roman throughfare. History reveals that in building the Via Appia, Appius Claudius encountered obstacles and difficulties similar to those overcome by the Tamiami Trail builders. While thrown up some 312 years before the coming of Christ it has been found that the Appian Way was built through territory somewhat similar to, but far easier to master than the Florida Everglades.

The Roman highway passes through the Pontine marshes, an area of approximately 450,000 acres, south of Rome, which is covered with water during the winter months. The condition reversed is applicable to the Florida Everglades except for the fact that the Everglades embrace an area probably 20 times as great as the Pontine marshes. It is further revealed that Via Appia was built of three layers of rock with trenches cut at its side and polygonal slabs of polished stone joined to form a permanent surface. The road had an elevation of about three feet and was 14 feet wide.

The similarity is striking in view of the fact that the Roman boulevard was built more than 22 centuries ago. The lasting qualities of the Tamiami Trail will hold their own against the great historical highway, the engineers declare, for like the Via Appia the trail in its course through the Everglades in Collier and Dade counties, is being built on almost solid rock. Unlike the Roman builder, however, the trail contractors will complete the project within three years as against some 300 years required for the com-



Project 669-X, Road 27, Collier County Between Belle Meade and Royal Palm Hammock.

pletion of the Appian Way from Rome to Brindisi, a stretch of 366 miles. Another striking comparison is reached in the distances covered. When completed the Tamiami Trail will be approximately 30 miles longer than the Via Appia with its route extending south from High Springs to Tampa, Fort Myers and Carnestown and thence east to Miami.

The arduous task shouldered by the State in the construction of the trail through the barren and treacherous Everglades in order that a first class, standard paved highway loop might connect the east and west coasts of Florida by way of the far southern portion which is being rapidly developed on the western side by Barron G. Collier, is recognized as the most daring piece of highway construction on record. Within 90 days Alexander, Ramsey and Kerr, road contractors working east from the town of Everglades, will reach the end of their portion of the project, while blasting and digging its way westward from Miami another contracting firm, R. C. Huffman, is battling against the impending rainy season of the tropics and a sea of solid limestone to form the connection of road fill this year.

With D. Graham Copeland as chief engineer, the west coast stretch of the highway is being built under the supervision of Charles G. Washborn, one of the builders of the Canadian Pacific railroad. Three giant dredges working on the project threw up more than two miles of fill in April, 1927, and approximately 6,100 feet the succeeding month.

The progress was slow and difficult. Forced to penetrate a solid formation of hard limestone, composed of sand and shell which hardened when exposed to fresh water, the road builders have been forced to blast every foot of the right-of-way through Collier and Dade counties. In order to loosen the foundation it has been found necessary to drill holes 13 feet deep each five feet along the roadway in which 36 sticks of dynamite are set off to break the under surface.

Coming up behind the drilling outfit and dynamite crew the big dredges dig steel buckets into the earth and rock to scoop out a ditch ranging from 10 to 15 feet deep and from 20 to 30 feet wide. The solid material taken from the canal is thrown to one side to form a fill ranging from six to 13 feet, arranged in accordance with the elevation of the land. This fill forms the elevated base for the road and is later cleared and leveled by skimmer shovels and heavy steam rollers.

The dredges work in two shifts with nearly as much work being done during the night as in the daylight hours. There are 78 miles of the Tamiami Trail in Collier county completely graded and open to traffic. There are many improvements scheduled on the trail in Collier, with certain sections of the old road due to be widened and elevated. With the completion of the trail work eastward the contractors plan to move the machinery back to make quick work of the other projects. The trail through Lee

(Turn to page five)



Florida Highways

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THE TAMiami TRAIL

IT is doubtful if there ever has been a road construction project which has so caught and held the interest and attention of the public as has that road which is commonly known as "The Tamiami Trail." Interest in this trans-state highway is not confined to Florida, but since it was first projected requests have been received for information from practically every part of the United States. It is not the purpose of this article to deal with the conception of the highway, for that will be treated by others more familiar with the history of the trail than is the writer. We feel that it is our part to set forth briefly the part of the State Road Department in constructing the road, which will be opened to traffic on April 25th.

Route and Location.

The Tamiami Trail, as the name implies, is the road which connects the City of Tampa on the west coast with the City of Miami on the east coast, and in this sense of the term it comprises not only State Road No. 27 between Miami and Ft. Myers, but also that portion of State Road No. 5 between Ft. Myers and Tampa. For the purpose of the present article we deal more particularly with that part which is included in State Road No. 27, since it is the closing of this gap which makes the entire trail usable between the cities of its termini.

Commencing at the City of Miami, The Tamiami Trail is projected almost due west to a point three miles east of the Dade County line. At this point the road separates into two branches; one proceeding in a northeasterly direction into Collier County and the southern route proceeding westward over work which was constructed by the Chevalier Corporation into Monroe County and at the end of their project proceeding at right angles northward to join the main trail again in Collier County, thence the road proceeds in a westerly direction through Everglades, Marco Junction, Naples and Bonita Springs to Ft. Myers, where it joins State Road No. 5 northward via Punta Gorda, Sarasota, Bradenton, Riverview, Six-mile Creek and Tampa.

Statistics.

The total length of the Tamiami Trail from Tampa to Miami is 274.33 miles, of which the length of Road No. 27, or that portion between Ft. Myers and Miami, is 143 miles. When the trail is opened on the 25th of April the whole of the road will be paved from Tampa to Miami with the exception of 15 miles of shell road, which is not now under construction, but which is a good serviceable road.

One of the most interesting features of the entire construction program is the fact that 60.54 miles of the distance between Ft. Myers and Miami had to be built through rock; that is to say, it was necessary to blast up the rock in order to form a grade over which the road might be constructed. It will, therefore, readily be seen that the use of dynamite became very necessary and the amount which was expended for this item alone is almost unbelievable.

The Tamiami Trail in order to reach Ft. Myers from Miami had to traverse the Everglades of Florida, a region hitherto regarded as practically impene-

trable. In its program to construct this road the Department has been faced in many quarters with an attitude of doubt, for predictions were frequently made that a high class standard type road would never be built through the Everglades.

Another great difficulty which was encountered in the construction of the road was that of transporting men and supplies from the base of supplies to the work under construction. In fact it was necessary to build a road ahead of the workers in order that men and material might be transported. For this reason it was impractical, if not impossible to let contract for the construction of sections of the trail to more than one contractor operating out of the same base because it was impossible for a second contractor to transport his men and supplies beyond the scene of operations of the contractor already at work.

In another section of this issue we are presenting an article by Mr. Horace A. Dunn, which deals with other phases of the work and gives perhaps a better idea of the physical and other conditions than we have here given. We are handicapped in our presentation of the trail by reason of the fact that it has never been our good fortune to go on the same and must content ourselves with facts and records which we find in the office. Our Chairman has kept in close touch with the work since its inception, traveling frequently to every part of it and urging on its completion at the earliest possible moment. For ourselves we are content with presenting in this issue numerous photographs of which we are extremely proud and which we believe will tell the story of the trail better than we could even if we had a more intimate personal knowledge of it. The feeling of satisfaction which comes to everyone connected with the State Road Department in the completion of this great project is a rare and happy one. It is our hope that the opening of this great cross-state road will be most auspicious.

MR. DUNN'S ARTICLE.

(Continued from page three)

county is completely paved to the Collier line and the State is preparing to build a modern concrete bridge across the Caloosahatchee river at Fort Myers to complete the link.

In addition to the Tamiami Trail work, which was actually started and carried on for some time by Mr. Collier before the State took over the contract, Collier county is teeming with road building activity. It is building a standard highway through barren country from Everglades, county seat, to Immokalee by way of Deep Lake. The road when completed will be 45 miles long and will be paralleled by a railroad system being built by the Florida Railroad and Navigation corporation, a branch of the Collier interests. The highway grade is now completed to a point three miles north of Deep Lake and is scheduled for completion in eight months from June 1st, of 1927. The county has also built the Chevelier cut-off, a four-mile branch from the Tamiami Trail.

Collier county is unpretentious in its work. Things that were thought outside the bounds of reason are being actually and rapidly accomplished within its boundaries. The vision and resourcefulness of the man after whom the county was named is rapidly bearing fruit for the 1,200,000 acres of the county

are taking on an air of usefulness, whereas three years ago they stood a stark wilderness, undeveloped and unwanted by man.

The development is going ahead uninterrupted. Land is being cleared and drained, towns are springing up and growing substantially, roads and railroads are being built, resources are being developed on a big scale and with the completion of the Tamiami Trail, the Everglades-Immokalee highway and other arteries, the Florida Everglades will bow in defeat at the hands of the conquerors.

The Florida Everglades have been finally overpowered and the seemingly impossible task has been accomplished in the building of a boulevard through its heart. The vast region, until recently untouched by man, will soon hum to the tune of heavy automobile traffic. The mysteries of the last of American frontiers will be solved and the silence which has shrouded the great unknown area will be replaced with a new and startling activity. The inhospitable Everglades, heretofore feared and shunned, will be the playground for motorists and it is expected that the Tamiami Trail will be the most heavily traveled highway in the South.

The contractors will soon be placing the finishing touches to the trail and the State will offer to the world a piece of highway construction unsurpassed in the United States. Now tourists to the "Sunshine State" will be able to motor from Tampa to Ft. Myers and thence through Collier and Dade counties to Miami and the East Coast on all paved highway over Florida's pride, the Appian Way of America.

Editor's Note—The foregoing excellent article was prepared and submitted to us by Mr. Dunn some months ago. We did not use it immediately, preferring to hold it until this day when the actual opening to traffic of the great Tamiami Trail is in sight. We express appreciation to Mr. Dunn for his article.

Gnot If We Gnow It

"The Gnu in Danger of Extinction," says a headline. Shall this popular little crossword animal disappear? Gno, gnever!—Punch.

Page Mr. Volstead

Here is the best limerick we have seen for five years, clipped from The Bookman:

There was a young lady of Ryde
Of eating green apples she died.
Within the lamented
They quickly fermented
And made cider inside her inside.
—Chicago Journal of Commerce.

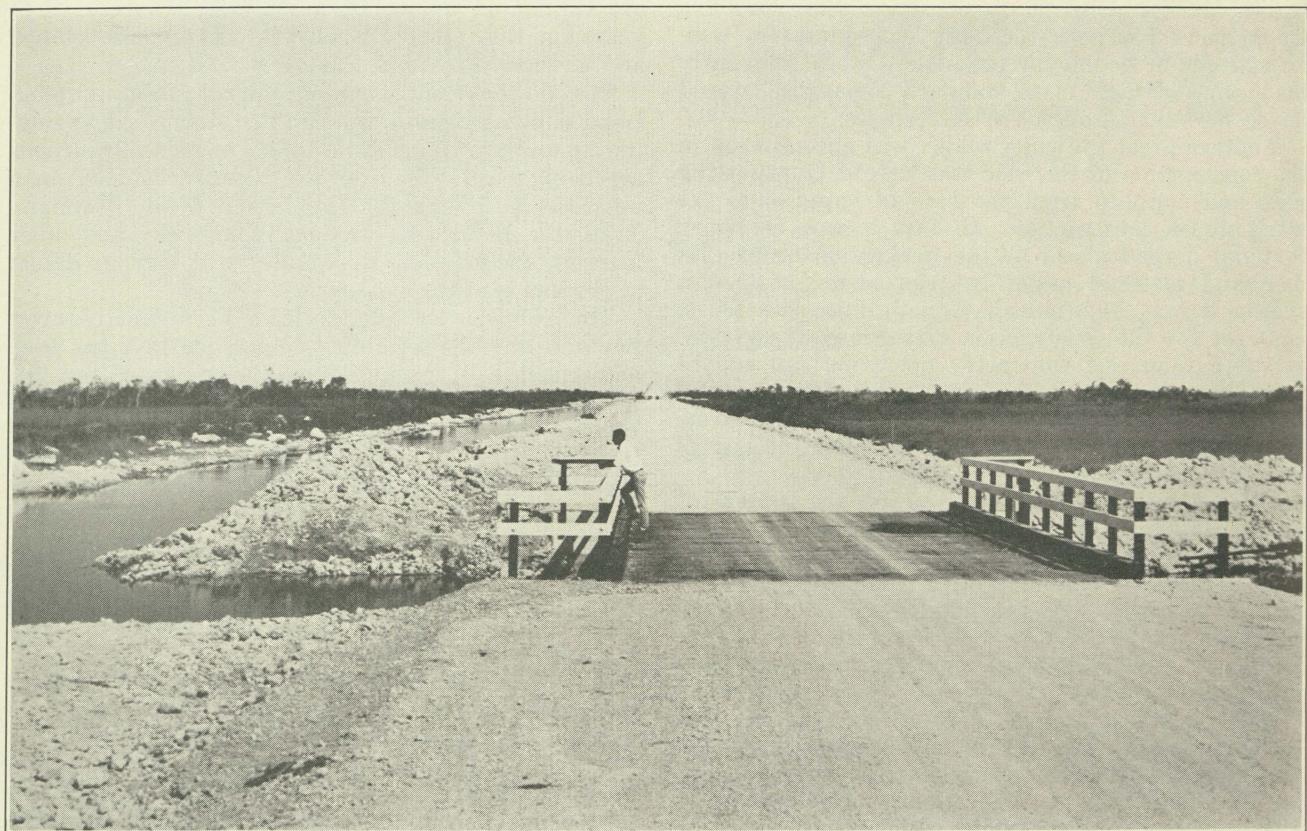
Weaker Sex

A man has less courage than a woman. Try to imagine one with twelve cents in his pocket trying on seven suits of clothes.—Detroit Free Press.

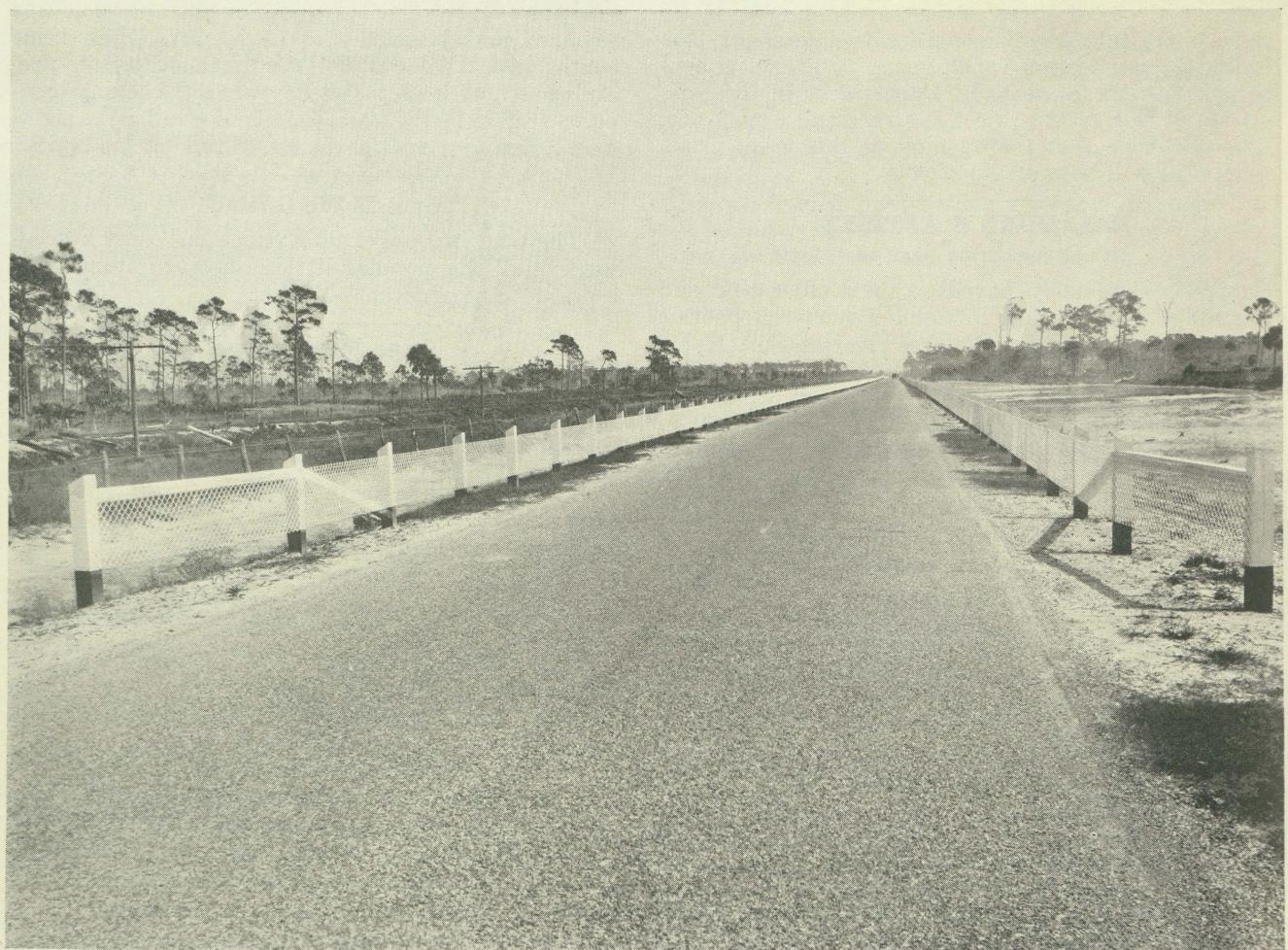
Municipal Economy

A bob-haired, scantily clad flapper was making her application at the pearly gates, and St. Peter was putting her through her category.

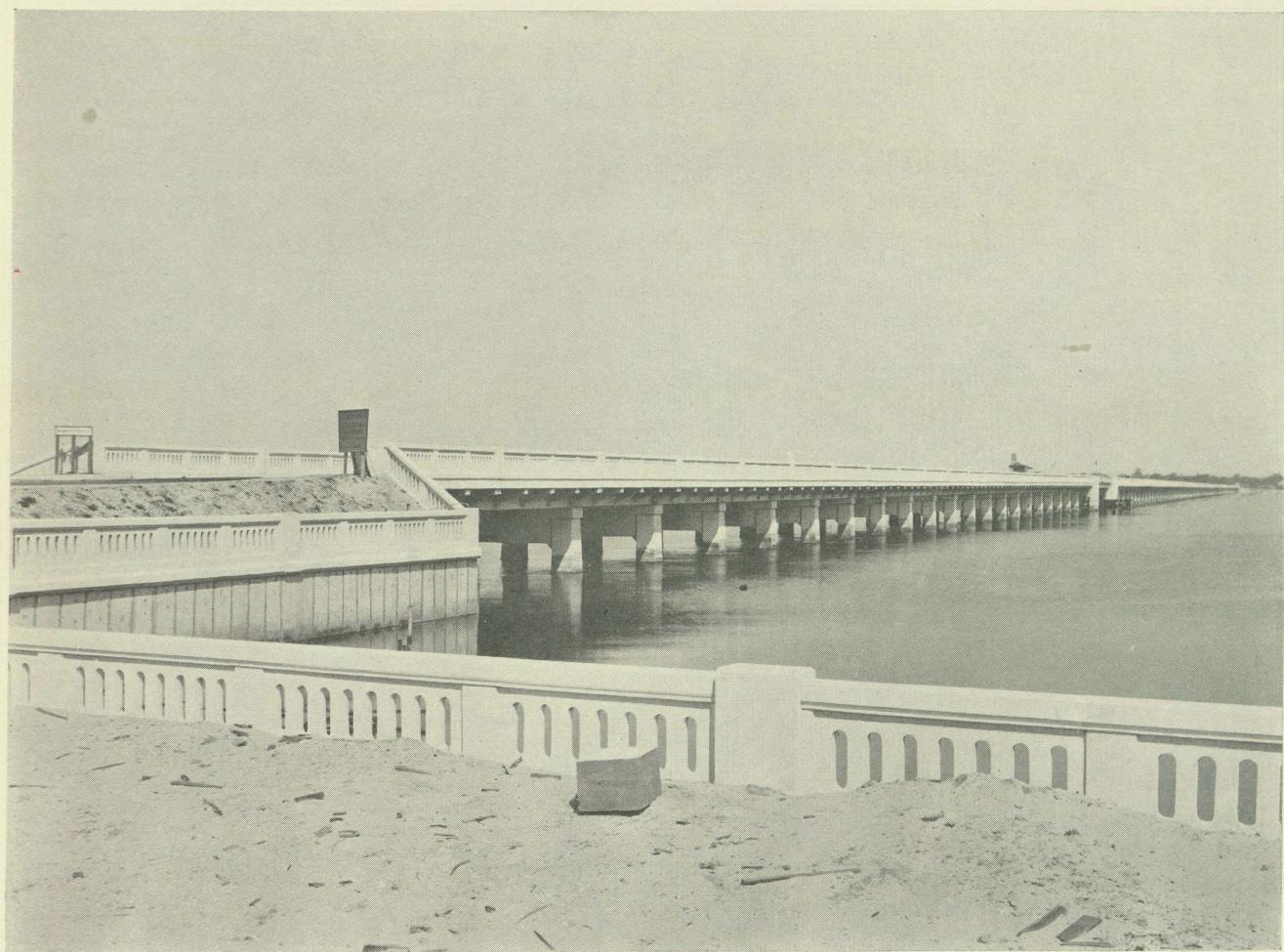
"What was your occupation?" he inquired.
"Men called me a gold-digger," she tittered.
"I'm sorry—but on account of the paving we can't let you in here."—American Legion Monthly.



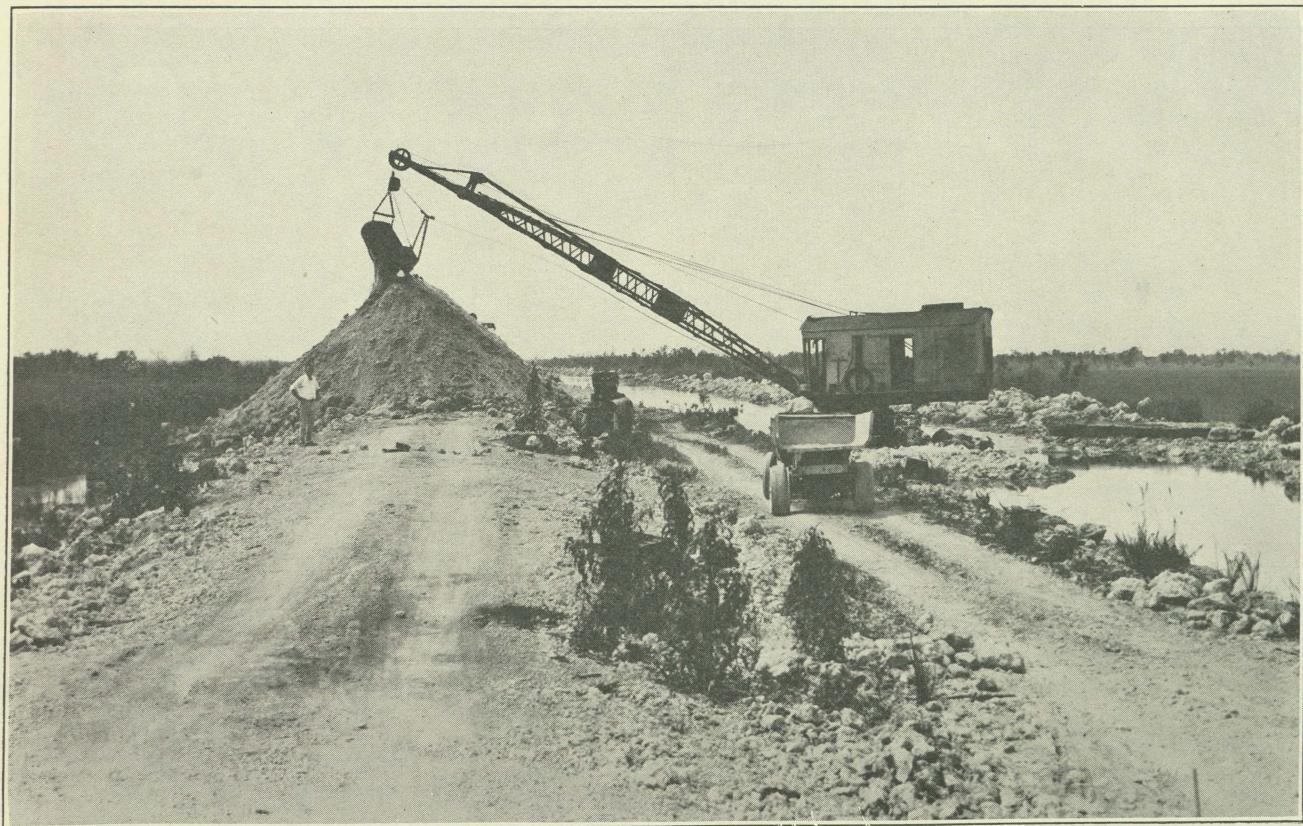
An Excellent Idea of the Road Bed and Typical Drainage Structure, Road 27.



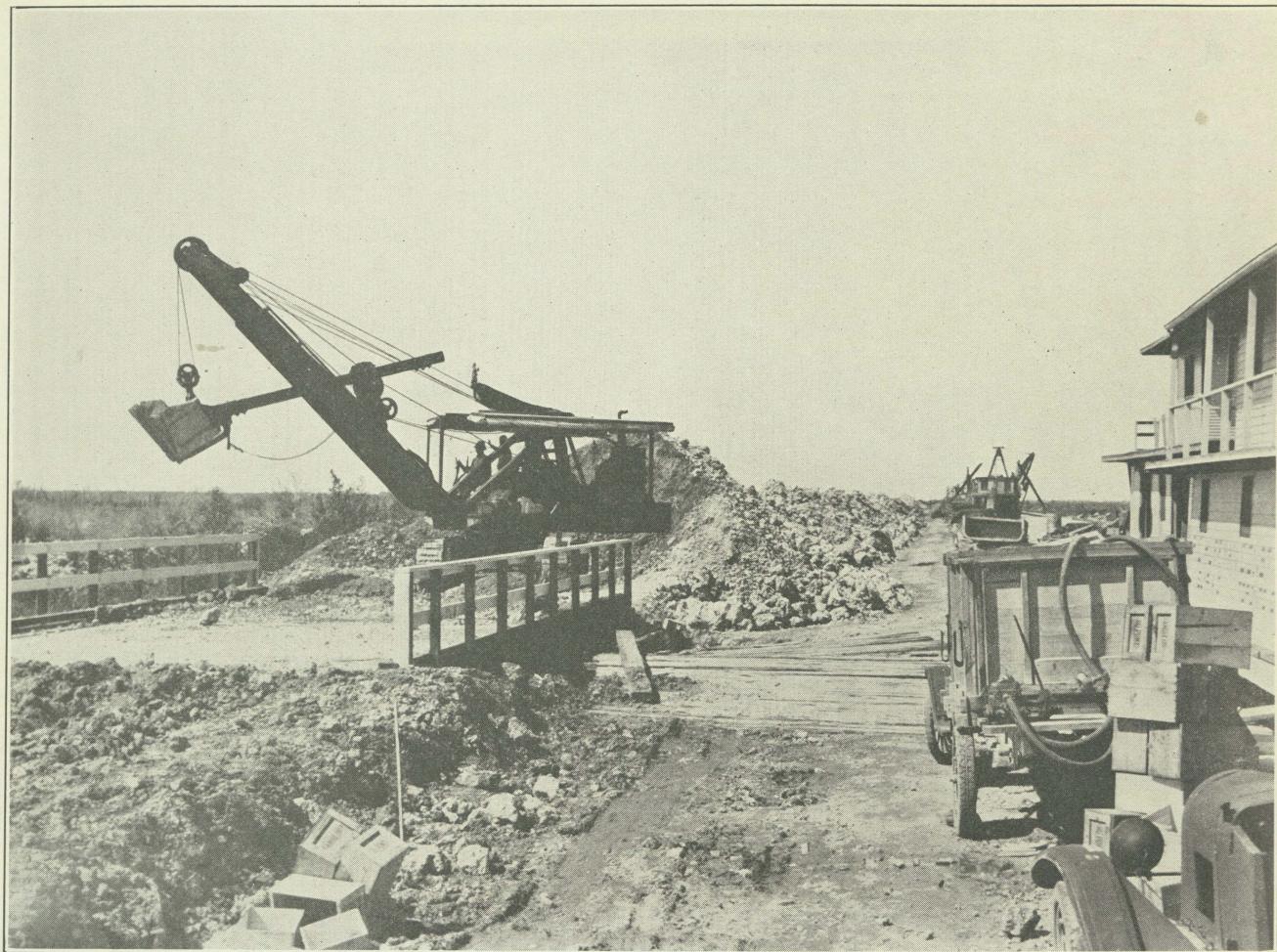
Project 564-C, Road 5, Charlotte County, South of Punta Gorda.



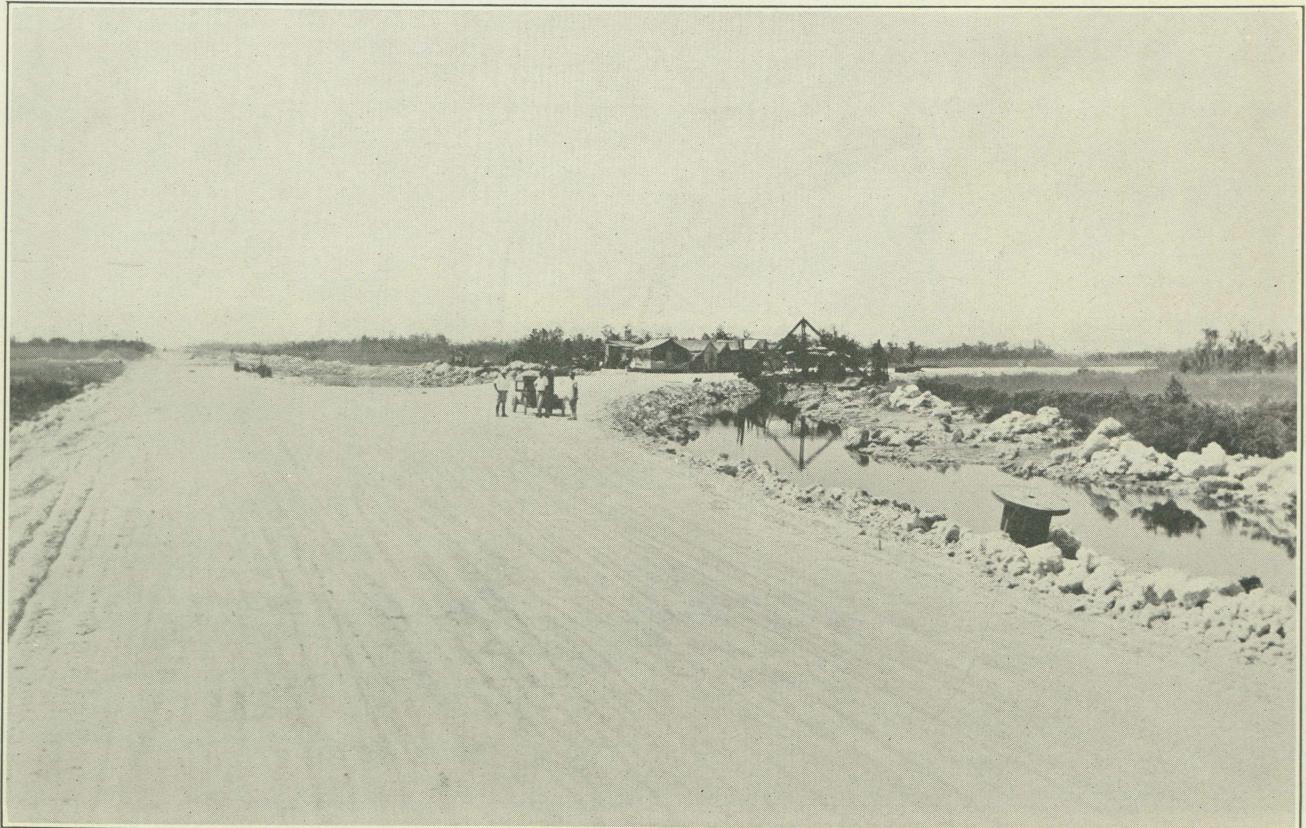
Project 593. Road No. 5, Manatee River Bridge.



Another interesting construction photograph.



Looking West from No. 1 Camp. New Bridge and grading shovel on left, old trail in the center. House Boat on right with dredges in distance on the right.



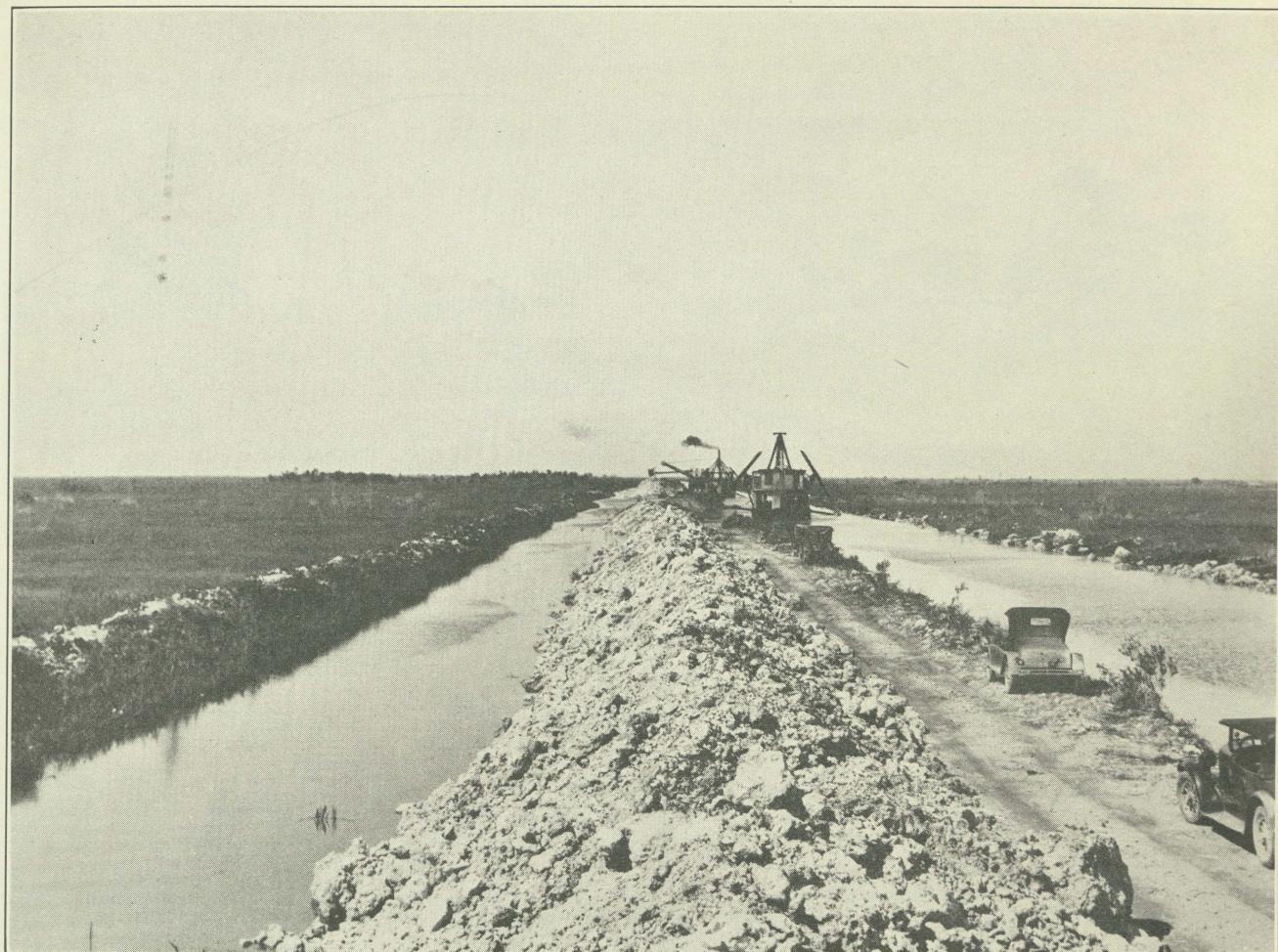
Where the Tamiami Trail divides.



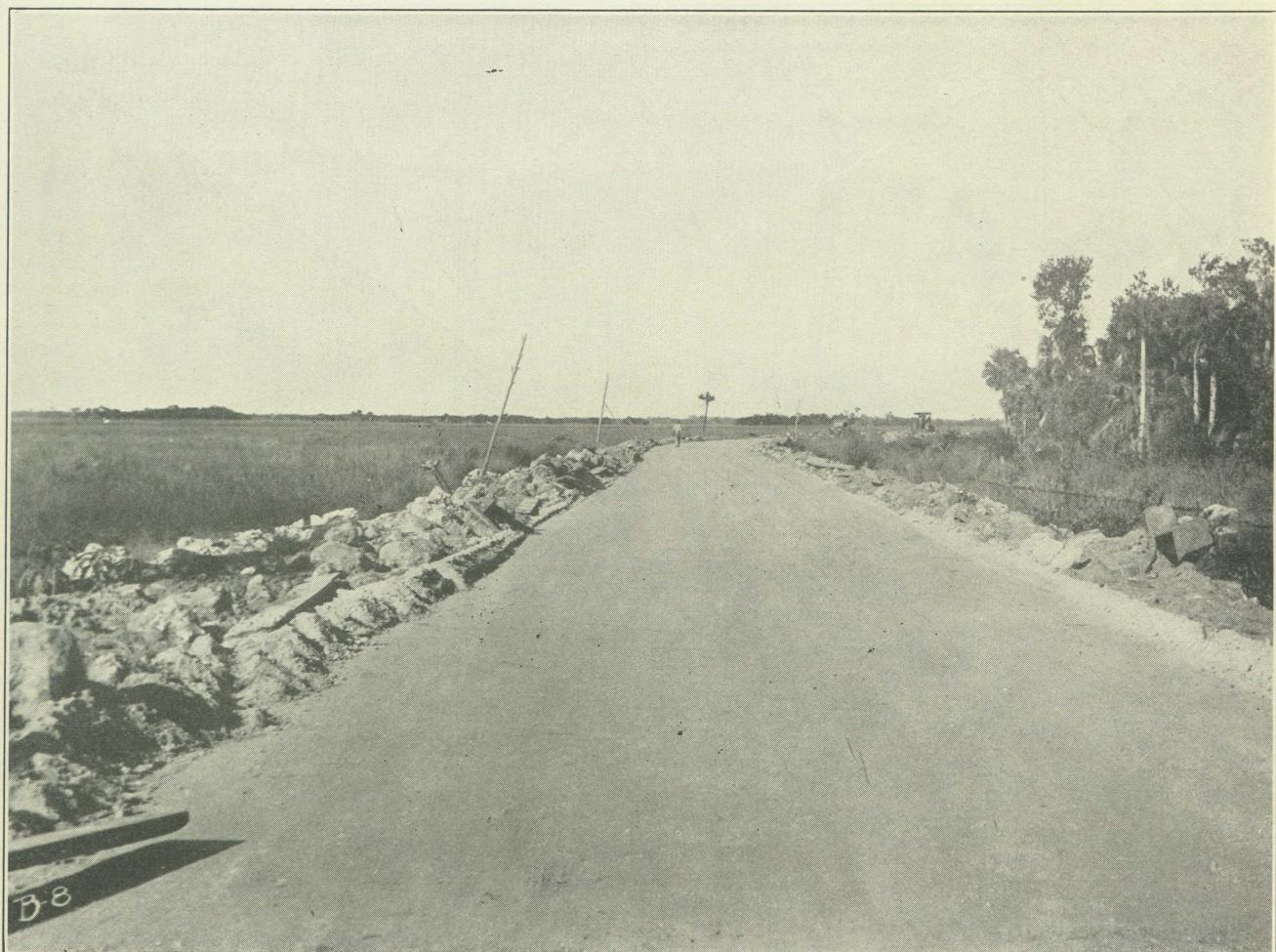
Project 613, Road No. 5, Sarasota County.



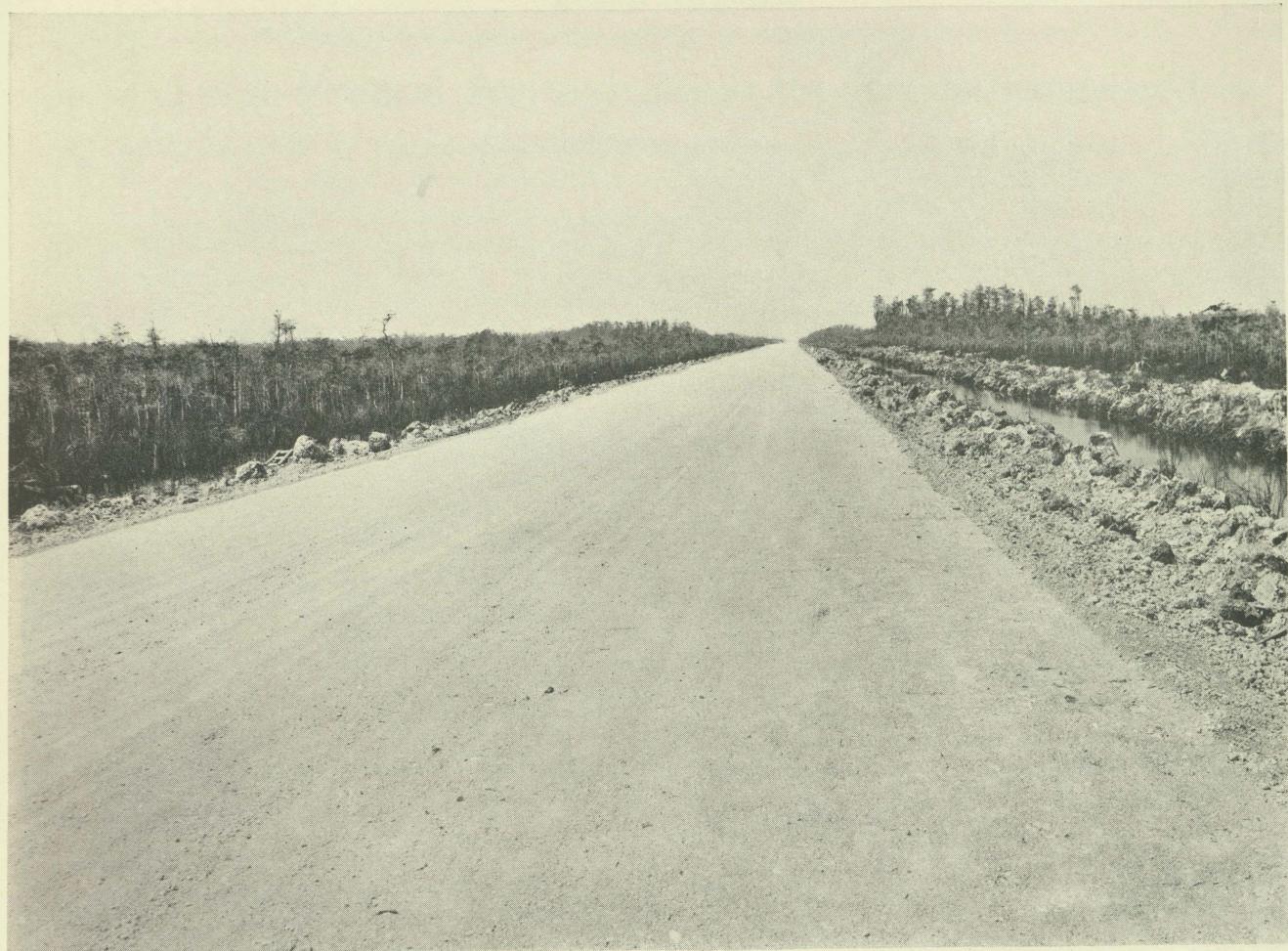
Road 27, Tamiami Trail looking West from Coral Gables.



Project 669-C, Road 27.



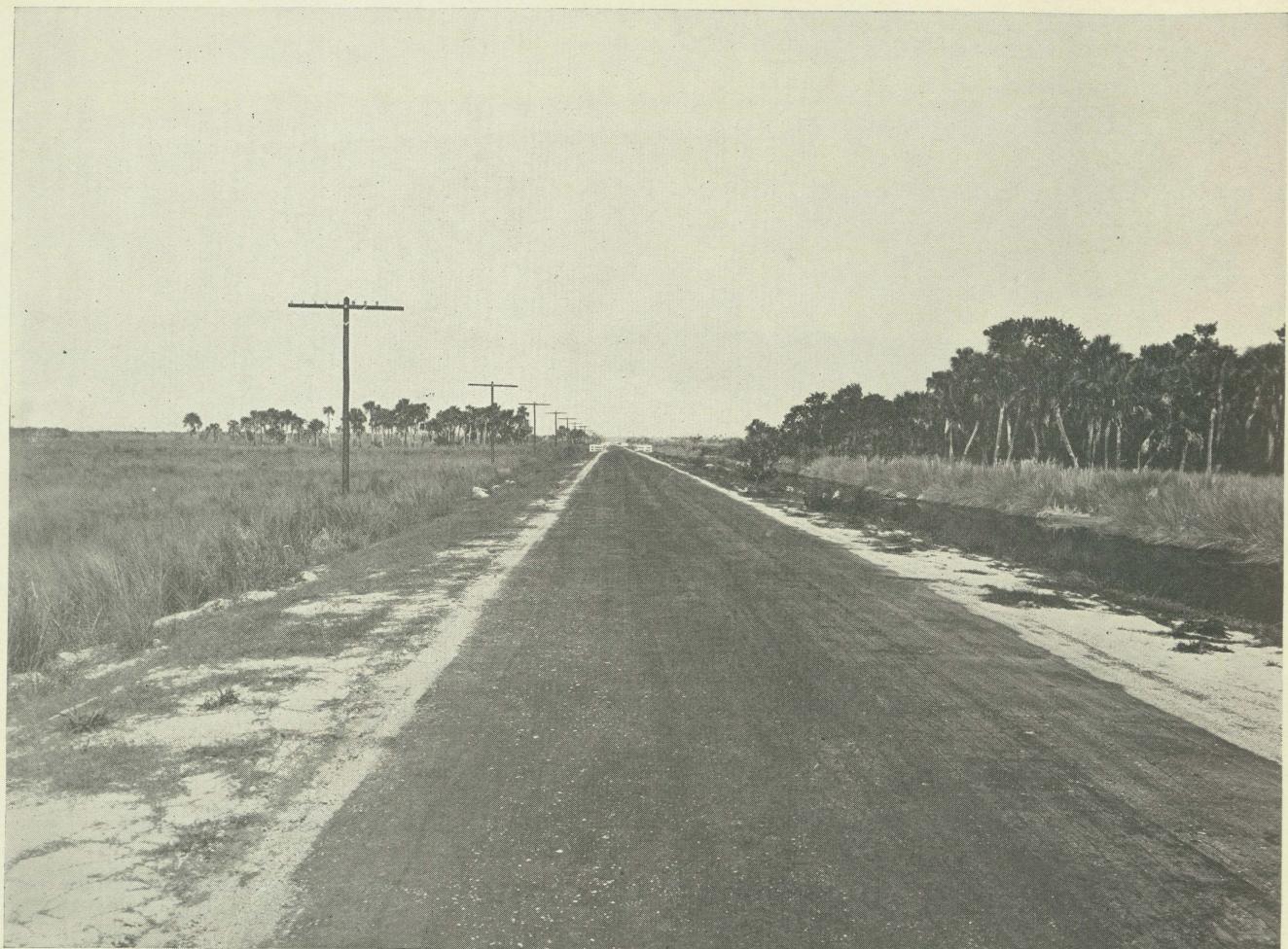
Project 669-W, Road No. 27, Finished Rock base.



Project 669-V, Road No. 27. Collier County, Local Rock, Between Carnestown and Dade County Line.



Project 589, Road 5, Lee County, Eight-inch Lime Rock base, surface treatment, Tamiami City.



Project 669-W, Road No. 27, Collier County, Eight-inch base local rock, with prime treatment.



Project 669-Z, Road No. 27, Collier County, Between Naples and Marco Junction.

Large Federal Appropriation for Roads Sponsored

ABILL authorizing the creation of a special highway fund, providing a total of \$407,341,145, to be allotted among the States in the same proportion as the Federal aid funds authorized each year, has been introduced in the House by Congressman Edward E. Browne of Wisconsin.

The bill providing for the utilization of this huge sum for highway construction, is in addition to the \$165,000,000 Federal aid bill already introduced in both the House and Senate, which is known as the Federal aid bill.

The sum provided in the measure is to be obtained by the repayment of French bonds issued after the war covering an invoice of approximately \$2,000,000,000 worth of property including road-building machinery which was ordered in June, 1919 by the War Department to be turned over to the Agricultural Department to be proportioned among the States for use in highway construction. Bonds totaling \$400,000,000 mature on August 1, 1929, the remainder one year later.

Before the War Department's order for the return of the equipment was received in France, negotiations had already gone too far for the sale of the property to France, at approximately 20 cents on the dollar. The intent on the part of the government, however, was that it should be used by the States in highway construction, and this intent can still be carried out by favorable action or the Browne bill.

The bill provides that the States are not required to pay a sum to exceed 20 per cent of the cost of the roads constructed from this fund.

The Browne bill will do the seemingly impossible. It will get good roads without increasing the taxes. The government of France owes the United States \$407,000,000 for merchandise purchased after the war and to be paid for in 1929 and 1930.

This indebtedness is totally different from the War Loans, as it was a purely commercial transaction, entered into for profit. The Browne bill proposes to set apart the proceeds of this sale as a special highway fund.

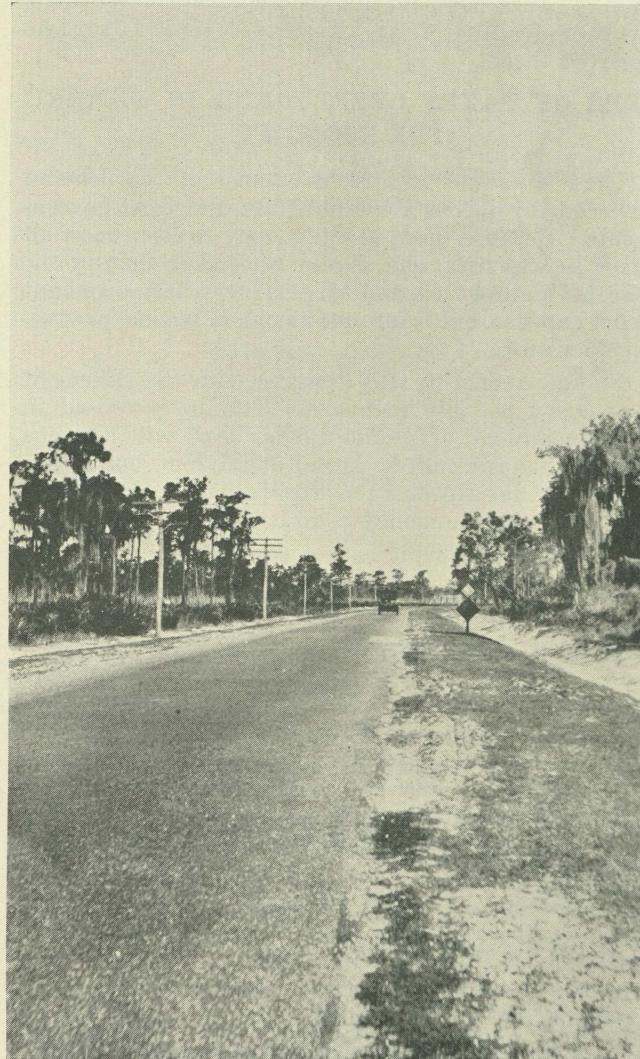
Following is the approximate sum which each State will get under the Federal aid allotment program as proposed in the measure:

Texas	\$21,937,500	New York	\$17,720,000
Pennsylvania	16,160,625	Illinois	15,356,250
Ohio	13,464,750	California	12,102,675
Missouri	11,724,375	Michigan	10,718,250
Minnesota	10,335,000	Kansas	10,081,500
Iowa	9,964,500	Georgia	9,652,500
Indiana	9,394,125	Wisconsin	9,116,250
Oklahoma	8,443,500	N. Carolina	8,350,875
Tennessee	7,873,125	Nebraska	7,726,875

Montana	7,566,000	Alabama	7,541,625
Virginia	7,134,625	Kentucky	6,892,500
Colorado	6,708,000	Mississippi	6,376,500
Arkansas	6,230,250	S. Dakota	5,947,500
N. Dakota	5,825,625	New Mexico	5,786,500
Oregon	5,762,250	Washington	5,513,500
Massachusetts	5,308,875	Arizona	5,152,875
S. Carolina	5,143,125	Louisiana	4,938,375
Nevada	4,626,375	Idaho	4,558,125
New Jersey	4,553,250	Wyoming	4,553,250
Florida	4,387,500	W. Virginia	3,870,750
Maine	3,312,875	Utah	3,153,125
Maryland	3,095,625	Connecticut	2,305,875
N. Hampshire	1,784,250	Vermont	1,784,250
Rhode Island	1,784,250	Delaware	1,784,250
Hawaii	1,784,250		

—New Mexico Highway Journal.

A civilized nation is one that is horrified by other civilized nations.—Brockville (Ont.) Recorder.



Project No. 17. Manatee County.

The Uses of Highway Finance

By A. J. Brosseau, Director of the Highway Research Board.

(From American Highways)

The American public has an investment of \$10,000,000,000 in rural highways.

Annual expenditures for the last few years have been at the rate of \$1,000,000,000 a year, and there are reasons for believing that annual expenditures will soon be at the rate of \$1,250,000,000 and probably become stabilized at that figure.

Authorities agree that 60 per cent of the amount expended is for construction and the balance is devoted to maintenance.

I speak of this at the beginning of my address because there is very general misunderstanding of the terms "Expenditures" and "Expenses." Expenditures to pay for income producing facilities charged to capital account, are one thing. Expenditures for maintenance expense, are another thing.

We are, therefore, faced with a situation of having a \$10,000,000,000 investment in highway facilities to which we will add \$750,000,000 a year, and an annual expense of \$500,000,000 for maintenance.

Is the capital structure of this transportation system sound? Who has paid and who will continue to pay, for these facilities? Are dividends paid? If so, who receives them?

USES OF TAXES OVERLOOKED IN DEMAND FOR ECONOMY

These questions are asked because of the demand for economy in our Federal, State and local governments. Because there is a tendency to look upon all taxes as expenses, one should remember that in the case of highway expenditures a very large amount is not expense, but is an investment in income producing facilities.

No one, I take it, will disagree with the statement that every possible economy should be practised in the expenditure of public funds. Nor will any one say that taxes would be levied at random, but rather only after careful and thorough consideration of the uses to which the money is to be put.

The spending habit is one easily acquired, so we must make sure all expenditures are for those things which have justifiable earning powers.

TAXES ESSENTIAL TO EXPANSION OF FACILITIES

But, these facts admitted, and with constant vigilance in our public expenditures, it still remains true that Government, like business enterprises, must have funds for the expansion of its capital facilities if it is to fulfill its function of providing for the needs of its citizens.

While this discussion is directed chiefly toward highway finance, it is necessary to analyze the general activities of Government in order that we may have a proper conception of the relation which highway expenditures bear to the total.

First, let me point out that all Government expenditures can no more be classified as expenses than can the entire budget of any business. Both must pro-

vide funds for capital structures. Both must provide money for expenses incidental to the maintenance of the policies of the stockholders. In the case of the Government these stockholders are its taxpayers.

EXPENSES VERSUS EXPENDITURES

Government is a great community enterprise which must cover a wider range of activities than any private business.

If we examine the structure of our Federal Government we find that its functions can be grouped into two classes.

Into the first come legislative, executive, judicial, national defense, payments on war debts, pensions and related activities.

In the second will be found all classes of property—such as national forests, public parks, reclamation and public buildings.

All of the items in these two divisions are not comparable for Federal and State, but there is a great similarity between them, and the classification of expenditures of the Federal Government will apply to many of the operations of State, county and municipal governments.

I desire to emphasize that while expenditures in the first group are necessary expenses, expenditures in the second group cannot be properly charged as expenses. They must be considered as capital expenditures and the amounts must be justified by the returns which they give the public. Mere amount is not the issue.

USES OF HIGHWAY FINANCES AND RETURNS

This brings us, then, directly to the question of the uses to which highway finances are put and the returns which they give.

If we view the question as an administrative one it will be found that rural highway expenditures fall into two groups, State and local, since Federal funds are expended by the States.

Each of these groups divided its appropriations into two classes—construction and maintenance, with the former constituting about 60 per cent of the total amount.

Through the construction fund, year after year, roads are built which are kept in service through the maintenance account. Each mile so constructed and maintained, adds to the capital facilities of the nation or the community, and by doing so contributes in some way to the well-being of every citizen.

EVERY CITIZEN A STOCKHOLDER

As for the capital structure of our highway system, there are no Federal bonds, only common stock (one might say) held by more than 115,000,000 citizens.

The total State bonded indebtedness for highway purposes at the beginning of 1927 was about \$835,000,000, with interest payments, approximating \$34,000,000, and principal payments another \$22,000,000.

Unfortunately, accurate figures as to county and

local indebtedness are not yet available, but the fixed charges appear to constitute a very small portion of the total expenditures.

Since 1916 only twenty-five States have issued bonds for highway purposes. The fact is, of course, inconclusive as to the advisability or inadvisability of the use of bonds for highways building since each State must gauge its need independently.

In many cases, however, the proud boast of the State that it is "paying for its roads as it goes" is attained at the expense of counties overburdened with highway bonds issued to build main roads which were the logical obligations of the State as a whole.

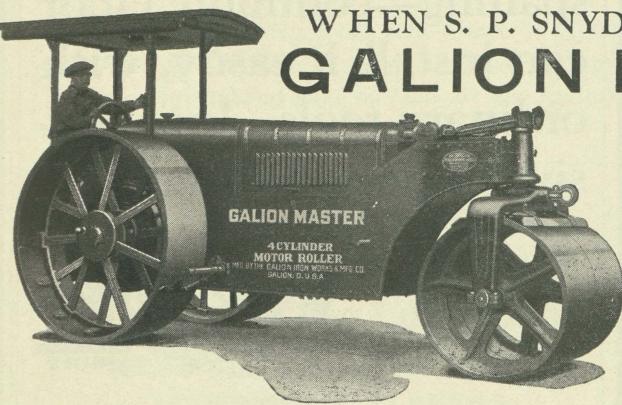
In the past, long term bonds were quite generally issued, but lately the tendency has been toward serial bonds, to be retired within the life of the original construction. There does not seem to be any justification for the fear that roads will "wear out," or be "destroyed," before the bonds are paid for. To illustrate, New York State issued some \$100,000,000 in bonds more than a decade ago to build a highway system. The unexpected increase in motor use soon rendered the narrow light-surfaces obsolete. New York did not scrap these roads, but used them as a base for wider, stronger roads, thus modernizing the system at a comparatively small additional cost. I am informed that the "present value" of these roads, at the time they were rebuilt, was more than the original cost.

WHO PAYS FOR THE ROADS TODAY

Who pays for the roads? To illustrate, let us call the citizens of our country the stockholders who operate through their Board of Directors, the members of Congress. They have long since recognized the need of a national system of highways and are co-operating with their subsidiaries—the States—in the construction of such a system, and with them are sharing the cost. The Federal contribution is something like 8 per cent of the total annual rural highway bill.

The motor user is paying in taxes very nearly 50 per cent of the total, exclusive of Federal Aid. Bonds and general taxes are resorted to for the balance, although the bonds are in many instances being retired from motor taxes.

So, our source of revenue is well spread and on a wide base. I doubt if anyone, today, can successfully challenge the statement that the motorist is paying for highways in the ratio of the benefits he receives.



Galion Master Roller—Universally approved by users from coast to coast.

IS THE HIGHWAY SYSTEM PAYING DIVIDENDS? WHO RECEIVES THEM?

We learn from the U. S. Census Bureau that the cost of highways is fully reflected in enhanced real estate values, and so adds tremendously to taxable property. And from the Federal Trade Commission study of national wealth, we learn that the definite valuations placed upon our highway facilities show a handsome return on cost.

The beneficial results upon our primary education through school consolidation, made possible by the improved road and the bus, is another of the many dividends paid by roads.

Our unequalled rail transportation system would not function without our present highway facilities.

OTHER DIVIDENDS MANY AND LARGE

The national defense has profited by the spirit of national unity developed by the highway and motor vehicle.

Rural free delivery, rural libraries, rural hospitals, police, fire and sanitary protection, have all followed an enlightened program of highway building.

We all receive our share of these dividends—whether we own cars or not—and it is not too much to say that our modern standards of living would be impossible without our improved highways.

MOTORIST RECEIVES SPECIAL RETURNS

The motorist, while contributing largely, receives a dividend in lower operating costs, to the extent of two or three cents per mile.

Add the recreational benefits, consider, even partially, the economic returns, and I think that no one can return other than an affirmative answer to the questions propounded.

Our highway finance structure is sound. It is necessary. And it is paying everybody.

Canning the Prattle.

A barber was surprised to receive a tip before he had cut his customer's hair.

"Thank you, sir! It isn't many who tip us first," he said.

"That isn't a tip," snapped the man in the chair. "That's hush money."—Answers.

WHEN S. P. SNYDER & SON BOUGHT THEIR SECOND GALION MASTER ROLLER

recently, they stated and proved that their first, purchased two years ago, was giving "entirely satisfactory service." S. P. Snyder & Son of Ft. Lauderdale is one of many satisfied "Master" users in Florida. May we give you the names of others? A line brings full information.

The Galion Iron Works & Mfg. Co. of Florida

1107-C9 Virginia Drive, Orlando

GALION ROAD MACHINERY
WILL SERVE YOU BEST



Important Road Measures Now Before Seventieth Congress

IN the first 10 days of the opening of the Seventieth Congress a number of very important bills were introduced in both Houses of Congress covering road legislation of nation-wide character.

H. R. 383, introduced by Mr. Dowell, chairman House Committee on Roads, provides an authorization of \$75,000,000 for the fiscal year ending June 30, 1930, and an equal amount for the year 1931 to carry out the provisions of the Federal Highway Act in constructing roads on the Federal Aid Highway System. This bill also carries an authorization of \$7,500,000 for 1930 and an equal amount for 1931 under the provisions of section 23 of the Federal Highway Act for additional authorization for forest roads and trails.

A bill introduced by Mr. Almon covering the same provisions carries an authorization of \$125,000,000 instead of \$75,000,000 as proposed by the chairman of the committee.

H. R. 5518, introduced by Mr. Colton, provides for several amendments and additions to the Federal Highway Act. These features are the same as were included in the Oddie bill passed by the

Senate of the Sixty-ninth Congress and are as follows:

1. The Secretary of Agriculture may make payments in excess of the regular amount provided on any project involving construction in mountainous, swampy, or flood lands where the average cost for preparing the road for a pavement exceeds \$10,000 per mile.

2. Also in the case where by reason of density of population or character and volume of traffic it is necessary to build a pavement wider than 18 feet.

The present provisions whereby 60 per cent of Federal aid in any one year is the maximum which can be authorized for primary roads is eliminated.

An amendment is proposed whereby in States where the public lands exceed 5 per cent of the total area of the State and the population of the State is less than an average of 10 people to the square mile of area, Federal funds up to 100 per cent may be used for the construction of a primary road, but the State money released from that road must be used on another road on the system. Another section provides for the protection of the shield as now used as a marker for designated roads on the system. This bill has also been introduced in the Senate by Senator Oddie.

H. R. 7343, introduced by Mr. Colton, authorizes the appropriation of \$3,500,000 for the fiscal year ending June 30, 1929, and an equal amount for 1930 and 1931 for the construction of roads, by the Bureau

(Turn to page 18)



Project 613, Sarasota County.

Carey Elastite Expansion Joint keeps its shape. It will not become brittle, neither will it melt or run. Moisture-proof, too. No loss, no waste, no spalling—common labor can install it easily, with ordinary tools. Inexpensive—and indispensable.

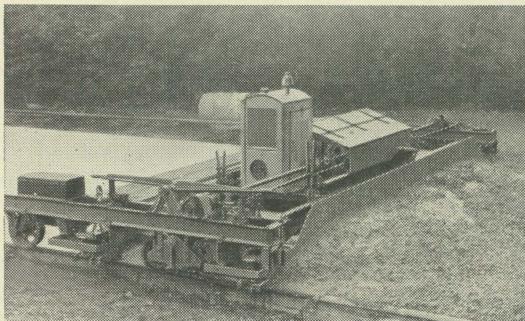
The Philip Carey

Company

Lockland, Cincinnati,
Ohio.

Carey Elastite
TRADE MARK REG. U. S. PAT. OFF.
EXPANSION JOINT

**Perfect Compacting Without
Tamping
with the
ORD Concrete Road Finisher**

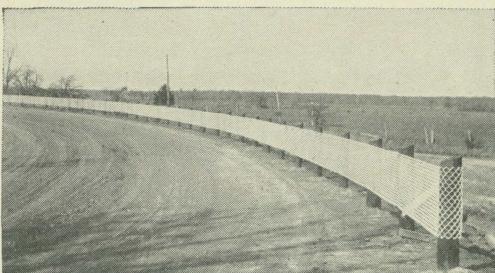


The ORD will do a correct job of compacting through the trowelling action of screeds. Less cement mortar is brought to the surface and less inert impurities are worked upward. This is accomplished without tamping or vibration, resulting in a smoother, harder and longer lasting road.

A. W. French & Company

*Manufacturers of the ORD Concrete Road Finisher
8440 Lowe Avenue Chicago, Ill.*

AMERICAN LIFE NET ROAD GUARD



**Passes all Federal and
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Supplied Painted and Burlapped.

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Corrugated Metal Culvert Pipe.

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Southern Metal Culvert Co.

Stuart, Florida

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**For any Type of Concrete Paving or
Surface Treatment**

Our Woodward Plant (destroyed by fire July 6th, 1926) has been rebuilt with the most modern Crushing and Screening equipment. This new plant is producing a material unexcelled in correct and uniform sizing.

Our daily capacity from two plants is 3,000 tons, and in addition thereto, we have storage facilities for taking care of rush or emergency orders.

Write or telegraph for delivered prices.

Woodstock Slag Corporation

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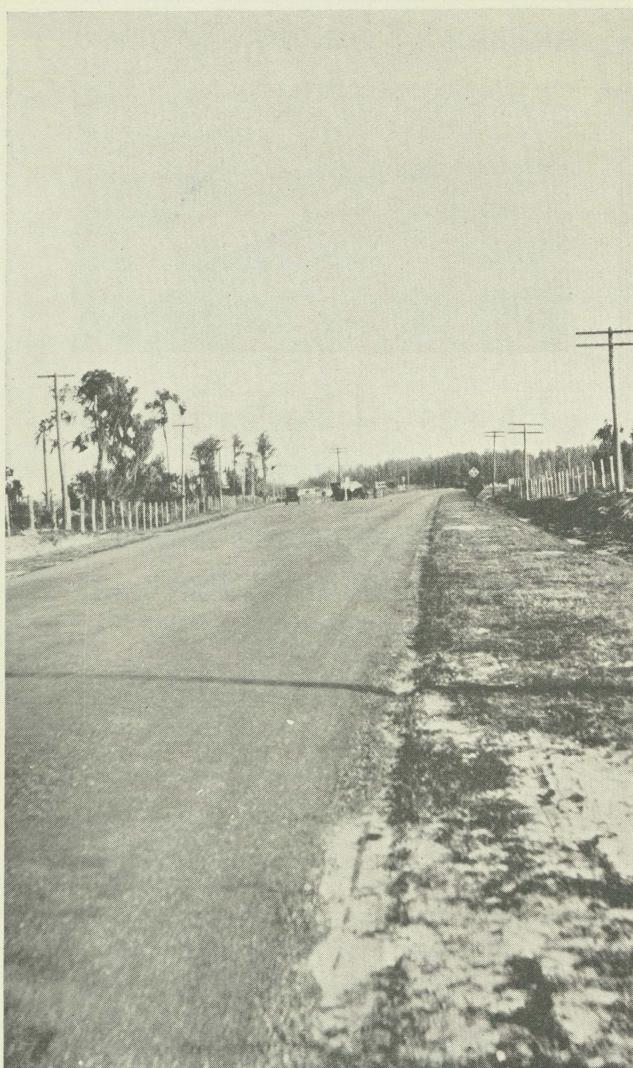
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Russell Road Equipment
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JACKSONVILLE, FLORIDA**



Project 581, Hillsborough County.

of Public Roads, on the main highways through unappropriated or unreserved public lands, non-taxable Indian lands, or other Federal reservations. This fund is to be limited to the States having more than 5 per cent of their area in lands hereinabove referred to and the allocation of this fund shall be equal to the proportion that said lands in each of said States is to the total area of said lands in the States eligible under the provisions of this act. This bill has been introduced, calling for an extra amount of money for roads through Government-owned lands, because the funds heretofore appropriated have not been sufficient to enable the Government to construct these necessary main highways through Government-owned land, to keep pace with the construction in the States outside of the Government-owned lands.

H. R. 7344, introduced by Mr. Dowell, and also by Senator Oddie of Nevada, would authorize the President to detail engineers of the Bureau of Public Roads to assist the governments of the Latin-American Republics in highway matters. This is in keeping with the request made by the President in his annual message to the Congress.

H. R. 5659, introduced by Mr. Reece, provides \$50,000,000 for 1929, \$65,000,000 for 1930, and \$75,000,000 for 1931 to be expended in the improvement of rural post roads over which rural carriers

travel exclusive of the roads of this character now in the Federal Aid Highway System.

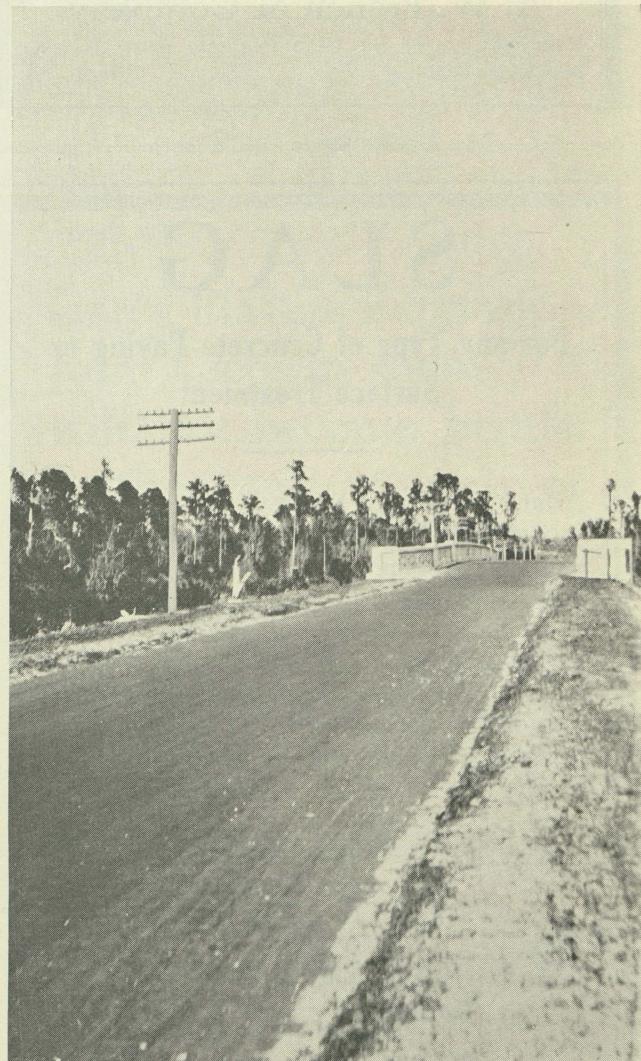
H. R. 107, introduced by Mr. Burtness, is a bill proposed to regulate the construction of bridges over navigable waters of the United States. This is a bill which proposes to regulate the toll-bridge situation and sets up governmental machinery so that it will not be necessary for individual bridge bills to be introduced from time to time in the Congress. It also provides that the construction and maintenance of these bridges when they are not owned by the States or political subdivision shall be supervised in their construction and maintenance by the State Highway Departments.

H. R. 129, by Mr. Evans, would amend the Federal Highway Act granting Federal aid 100 per cent in public land States as provided in the Colton bill, and also would amend the act so that the limitation of payments of \$15,000 per mile would be changed to 50 per cent of the total cost thereof.

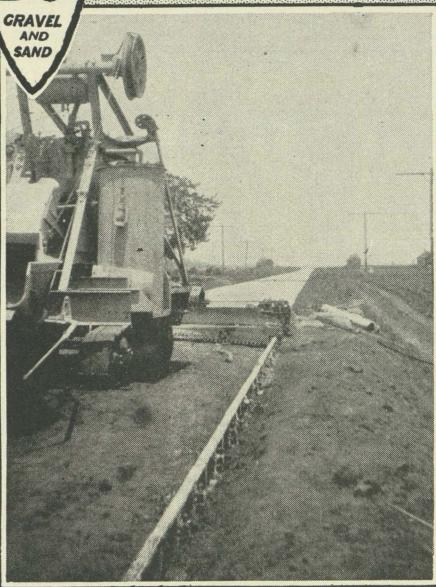
H. R. 18, by Mr. Denison, would amend the Federal Highway Act so that Federal aid could be granted on roads leading to toll bridges owned by private individuals.

S. 659, by Senator Pittman, would provide for

(Turn to page 20)



Projects 510-512, Hillsborough County, Big Bullfrog Bridge.



The three “R’s” on every road job

IS the aggregate right—has it been washed and thoroughly cleaned? Is the size right—for this particular job? Are the shipments coming through regularly—on schedule time?

Arrowhead SAND AND GRAVEL

These three “R’s” stand between you and profits on every project. But they shouldn’t. That’s our job and our responsibility. Let us service your next job—and prove it.

MONTGOMERY GRAVEL COMPANY
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President.

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Florida Crushed Stone Co.

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Producers of High Grade Washed and Sized

CRUSHED STONE For All Purposes

Capacity 2,500 to 3,000 tons daily. Quarries at Conrock and Camp, Florida, in Hernando County, on the Atlantic Coast Line and Seaboard Air Line Railroads.

C. W. STONE, Sales Manager

Sales Offices:

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Reinforcing Bars for Concrete

Made in the United States
from new billet steel.

Intelligent, dependable service
by expert bridgemen.

Dudley Bar Company

BIRMINGHAM, ALA.

Contracts Awarded by State Road Department

January 1st, 1928, to March 15th, 1928

Contractor—	Project No.	County—	Length Miles	Length Feet	Contract + 10 %	Type
Sutton Bros.	55-B	Alachua	457	\$ 54,377.17	Concrete	
General Const. Co.	677-D	Levy	1335	43,000.98	Timber	
Frost Const. Co.	710-B	Hillsboro	260	54,775.16	Concrete	
Sutton Bros.	764-B	Suwannee	113	19,043.82	Conc. Overh'd.	
Duval Engr. & Contr. Co.	677-D	Levy	8.91	110,370.35	R. B. S. T.	
E. F. Powers Const. Co.	710-C	Hillsboro	12.69	95,125.45	C. G. & G.	
B. Booth	755	Polk	11.22	58,518.86	C. G. & G.	
Little & Lee	757	Polk	10.26	63,516.17	C. G. & G.	
Little & Lee	758	Polk	8.34	46,380.34	C. G. & G.	
Gilbert & Hadnock	732	Polk	8.94	57,077.26	C. G. & G.	
C. G. Kershaw Contr. Co.	736	Holmes	8.58	45,097.93	C. G. & G.	
C. G. Kershaw Contr. Co.	709	Holmes	9.09	53,931.71	C. G. & G.	
Morgan-Hill Paving Co.	61-C	Gadsden	9.77	244,581.31	Concrete	
Franklin Const. Co.	710-A	Hillsboro	6.18	38,592.08	C. G. & G.	
E. M. Chadbourne	697	Escambia	.14	3,401.25	Surface	
Robert G. Lassiter & Co.	683-A	Palm Beach	8.04	264,999.43	Concrete	
Rutherford Const. Co.	695	Lake	3.00	46,992.07	R. B. S. T.	
S. G. Collins	827	Escambia	8.12	50,151.29	C. G. & G.	
M. C. Winterburn, Inc.	61-A	Gadsden	10.00	231,578.27	Concrete	
Phoenix Asphalt Paving Co.	669-X	Collier	9.40	28,814.77	Surface T'd.	
Everglades Const. Co.	62-C	Osceola	11.83	115,303.71	C. G. & G.	
A. D. Weeks	62-D	Osceola	12.62	83,299.72	C. G. & G.	
A. D. Weeks	62-A	Osceola	12.52	66,571.01	C. G. & G.	
R. C. Huffman Const. Co.	807-A	Palm Beach	10.81	201,713.22	R. B. S. T.	
R. C. Huffman Const. Co.	807-C	Palm Beach	6.14	99,923.54	R. B. S. T.	
C. A. Steed & Son, Inc.	804	Glades	18.55	416,083.52	R. B. S. T.	
Duval Engr. & Contr. Co.	659	Clay	7.25	95,449.25	R. B. S. T.	
Silas Gibson	815	Okaloosa	13.58	60,680.23	C. G. & G.	
W. J. Bryson Paving Co.	819	Okaloosa	4.69	20,979.67	C. G. & G.	
W. J. Bryson Paving Co.	823	Okaloosa	9.18	34,084.24	C. G. & G.	
W. J. Bryson Paving Co.	824	Okaloosa	9.81	59,898.02	C. G. & G.	
Maddox Mach. & Foundry Co.	743	Bay	120	13,774.47	Timber	
		Total	249.66	2,951	\$ 2,878,086.27	

Federal funds for maintenance in the public land States.

H. R. 7724, by Mr. Edwards, would provide that American materials and equipment in highway construction be given preference on roads constructed with Federal funds.

H. J. Resolution 79, by Mr. Furlow, provides for a joint commission composed of two members of the Senate, two members of the House, and two to be appointed by the President, to study proposals for the establishing of a national system of express highways.

H. R. 447, by Mr. McLeod, would provide for a Pan American Peoples Great Highway Commission. This bill is very similar to the one introduced in the last Congress by Mr. Cameron in the Senate.

H. R. 7205, by Mr. Hudspeth, would appropriate \$18,000,000 to construct a military highway paralleling the Mexican border.

S. J. Resolution 19, by Senator McNary, provides for the designation of a route to be known as the Oregon Trail.

S. 1182, by Senator McNary, provides for naming of certain highways through State and Federal cooperation and provides that when these roads are named by State and Federal authority that the name, or sign, or marker used in designation thereof shall not be used directly or indirectly by any other authority.

H. R. 4625, by Mr. Moore, of Virginia, provides \$3,500,000 to be expended from 1928 to 1931, inclusive, for the construction of a memorial highway from the Arlington Memorial Bridge, across the Potomac River, at Washington, D. C., to Mount Vernon.

H. R. 19, by Mr. Denison; H. R. 564, by Mr. Parker, and S. 1252, by Senator Watson, are proposed legislation very similar in character, introduced for the regulation of interstate commerce by motor vehicles

operated as common carriers on public highways. These bills cover very much the same material introduced in the last Congress which would place the regulation of these common carriers in the hands of the properly delegated State officials, under certain restrictions and authority. Provision is made for appeals to the Interstate Commerce Commission.—Badger Highways.

When Justice Winks

The magistrate bent stern brows on the defendant. "You are charged with exceeding the speed limit last night," he declared. "Are you guilty or not guilty?"

"Well, you can decide for yourself, Judge," replied the prisoner. "I was in that car you passed just before they pinched me."—American Legion Monthly.

Civilization is the condition in which one generation pays the last generation's debts by issuing bonds for the next generation to pay.—Boston Herald.

Haunting Memory

A certain golfer who is so completely absorbed in his pastime that mere domestic matters have long ceased to trouble him, has a small son named William.

One evening, upon returning from the country club, his wife remarked, "William tells me he was caddy-ing for you all afternoon."

"Is that so?" exclaimed the astonished man. "Well, now that you mention it, I thought I had seen that boy before."—The Outlook.

Not Exactly Downy

Mrs. Flanagan—"Was your old man in comfortable circumstances when he died?"

Mrs. Murphy—"No, 'e was 'alf way under a train."—Western Christian Advocate.

Throughout Florida
You'll Find
ARMCO CULVERTS
!

Culvert buyers look for strength, long life and fair cost—and they find that combination in Armco Invert Paved Culverts. Florida engineers will tell you that shifting sands and "spongy" fills are no handicaps to these dependable corrugated culverts.



An 18" Armco Culvert on the job in Charlotte County, Fla. —showing how side drain is accomplished through head and wing walls.

If you're interested in better drainage, by all means write for descriptive literature.



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**Action With
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Have Your Bonds or Your Casualty Insurance written through an Agency famous for its immediate, intelligent and courteous service.



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Florida Cement
EXCEEDS
State Highway Specifications

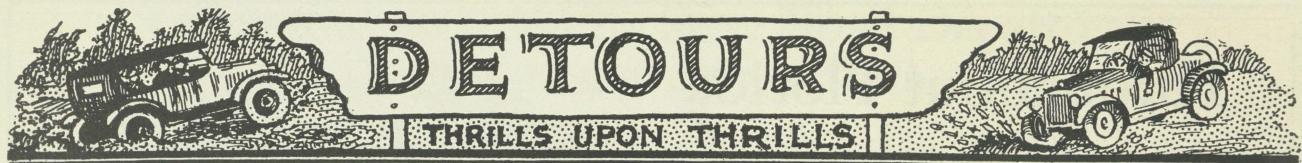
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CAPACITY



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SACKS

"A Florida Product for Florida Construction"

Florida Portland Cement Co.
Tampa, Florida



Some Score

Bill tells a friend of his—a beginner at golf—who, when asked how he came out on the first day on the links, replied that he made it in eighty.

"Eighty," ejaculated Bill, "that's really remarkable. Most old timers would envy you that score. You'll surely be an enthusiast from now on."

"Yes," said the novice, condescending, "I'm going back tomorrow and try the second hole."

Abie: "Vot is de idea of raising de price of gasoline all de time?"

Garage Man: "What do you care? You haven't got a car."

Abie: "No, but I got a cigar lighter."

Sales resistance just makes things worse. When at last you buy, you must pay for all the effort that has been expended on you.—Woodstock Sentinel-Review.

Big Business

Floorwalker (to impatient customer, leaving)—"Can't you get waited on, Madame?"

Madame—"No. I'm afraid I came at an unfortunate time; your salesladies are in conference."—Boston Transcript.

Great Britain thinks we ought to cut our tariff. The chickens next door think we ought to leave our gate open.—American Lumberman.

Nature is kind, and since the Eskimo uses fish-hooks for money she gives the wife a six-months' night to get it out of hubby's pocket.—Fresno Republican.

Just how much praise would the busy bee get if he spent his time storing up something man couldn't steal?—Bethlehem Globe.

We Are R-r-revenged

Bill Moore, our local barber, got excited while shaving himself in front of the mirror yesterday, and before he realized what he was doing he had sold himself three bottles of hair tonic and short-changed himself in the bargain.—Washington Cougar's Paw.

Women

Women, according to statistics, spend more on their make-up than the Government spends on warships, and that probably explains why you hardly ever see a fellow taking a war-ship out to dinner.—New York Evening Post.

Brief Romance

She loved the lad with the pigskin; she rode with the lad with the coonskin; she admired the lad with the sheepskin; but she married the lad with the frog-skins.—Fond du Lac Commonwealth.

Blessed Are the Poor

The poor woman pays \$1.98 instead of \$25 for a \$1.98 hat.—Manila Bulletin.

Cheap Publicity

Conductor—"How old is the little girl?"

The Child—"Mother, I'd rather pay the fare and keep my age to myself."—Humorist (London).

The family circle is now the steering-wheel.—The Thos. E. Pickerill Service.

Needs Strong Coffee

Mistress—"Mary, has the chemist sent that sleeping draught yet?"

Maid—"No, ma'am."

Mistress—"Then ring him up and ask him if he expects me to keep awake all night waiting for it."—The Passing Show (London).

Damming the Flood

Molly (weary of sermon, in very audible whisper)—"Mummy, if the church caught fire, would he stop then?"—Punch.

Mister Grandma

Wife—"Now that I have had my hair bobbed, I don't think I look so much like an old lady."

Husband—"No. Now you look like an old gentleman."—L'Illustration (Paris).

Mother Tongue

"Does your daughter speak Esperanto?"

"I should think so—like a native."—Buen Humor (Madrid).

Sorry He Spoke

The doctor had forgotten his patient's name; but, not willing to admit it, said, "Is your name spelled with 'i' or 'e'?"

The astonished patient answered, "Why doctor, my name is Hill."—Western Christian Advocate.

Location Inferential

A collection attorney received an account accompanied by a request that he "move heaven and earth to get this scoundrel." He replied: "There would be no use in moving either locality in this instance. The debtor died last week."—Utica Gas and Electric News.

"Have You Seen My Aunt?"

Willis—"I've taken three lessons in French from a correspondence school."

Gillis—"So? Could you carry on a conversation with a Frenchman?"

Willis—"Oh, no, but I could talk to anybody else who had three lessons."—Life.

F. A. P. 168-C (Jefferson County, Ga.): 5.58 miles of Slag Concrete between Wadley and Louisville; laid 1927.

F. A. P. 18 (Putnam County, Fla.): 13 miles of 2^{1/2} Penetration Slag Macadam on Dixie Highway; laid 1922-23.

F. A. P. 298 (Dougherty County, Ga.): Photo shows one of two Sheet Asphalt projects, totalling 11½ miles, in which basic slag was used in binder course; laid 1924.

County Road No. 5 (Marion County, Fla.) on short route Jacksonville-Tampa Highway: 18 miles of double surface treatment—Basic Slag wearing surface on an 8-inch compacted Ocala Lime Rock base; laid 1925.

Ensley-Wylam-Mulga Road (Jefferson County, Ala.): 13½ miles of Asphaltic Slag Concrete on Slag Macadam base; laid 1923.

Warrenite Bitulithic paving on Dixie Highway through West Palm Beach; laid 1925-26; slag aggregate used in concrete curb, gutter, base and wearing surface.

BASIC SLAG
For better Roads

16 MILLION sq. yds.
Slag roads and Streets

A careful tabulation shows that a total of 16 million square yards (1510 miles) of roads and streets have been built during the past twelve years with

**"ENSLEY & ALA CITY"
BASIC SLAG**
CRUSHED & SCREENED

The approximate figures for each of the principal types of paving follow:

Bituminous Wearing Surface
Amiesite, Asphaltic Concrete, Penetration Macadam, "Fin-Roc," Finley Method Surface Treatment, Sheet Binder and Warrenite Bitulithic 1138 Miles

Concrete Base
Slag not used in wearing surface—Brick, block, etc. 135 Miles

Portland Cement Concrete
Highways, streets and alleys (16 million sq. yds.) 237 Miles
Total 1510 Miles

The increasing use (now more than a million tons a year) of Basic Slag for all types of hard surface highways is due largely to the fact that each shipment is crushed, screened and sized to meet the standard requirements of the paving in which it is to be used.

BIRMINGHAM SLAG COMPANY
Slag Headquarters for the South
Atlanta Thomasville Birmingham Montgomery Jacksonville Ocala, Fla.

Status of Construction

THROUGH JANUARY 31, 1928

Proj. No.	Contractor.	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Per Cent Complete
6	Higgison Construction Co.	1	Madison	5.47	5.47	5.47			99.20
49	Cone Bros. Construction Co.	4	Flagler	13.82			13.82	13.82	S.T.R.B. 100.00
50-A	L. M. Gray	14	Putnam	6.19			6.19	3.09	S.T.R.B. 90.00
50-C	N. C. Cash	14	Putnam	10.03			10.03	7.42	S.T.R.B. 95.00
52	W. J. Bryson Paving Co.	1	Escambia	10.09	10.09	8.68			89.00
55	W. J. Bryson Paving Co.	14	Alachua	16.77	16.43	12.41			Graded 82.00
61-A	M. C. Winterburn, Inc.	1	Gadsden	10.00				0.00	Concrete 0.00
61-C	Morgan Hill Paving Co.	1	Gadsden	9.77				0.00	Concrete 0.00
62-A	A. D. Weeks	24	Osceola	12.52	0.00	0.00			Graded 0.00
62-C	Everglades Const. Co.	24	Osceola	11.83	0.00	0.00			Graded 0.00
62-D	A. D. Weeks	24	Osceola	12.62	0.00	0.00			Graded 0.00
518	Barnes Construction Co.	5-A	Lafayette	17.75	15.97	9.76			Graded 52.00
535	L. B. McLeod Construction Co.	5-A	Lafayette	13.20	10.16	5.41			Graded 37.00
543	M. C. Winterburn, Inc.	3	Seminole	14.20			14.20	14.20	Bit. Mac. 99.00
585	State Convict Forces	1	Santa Rosa	5.19	3.00	2.00		1.75	S.T.S.C. 25.00
614	West Construction Co.	5	Sarasota	17.34			17.34	17.34	Bit. Mac. 99.00
615	E. F. Powers Construction Co.	5	Sarasota	11.92	11.68	5.36			Graded 45.00
624	L. B. McLeod Construction Co.	50	Hamilton	6.23	5.92	3.92			Graded 56.69
640-A	West Construction Co.	4	Martin	9.00			0.00	0.00	S. Asph. 0.00
640-B	West Construction Co.	4	Martin	11.80			5.90	0.00	S. Asph. 24.40
644-C	State Convict Forces	10	Wakulla	5.06	2.98	.96			Graded 20.20
645	State Convict Forces	10	Wakulla	18.50			14.00	10.00	S.T.R.B. 80.00
646	State Convict Forces	10	Franklin	18.00				17.20	S.T.S.C. 93.00
651	State Convict Forces	10	Gulf	14.72			12.50	0.00	S.T.R.B. 72.67
653	H. D. Spangler	4	Broward	13.46	13.46	13.46			Graded 100.00
654	S. P. Snyder & Son	4	Broward	6.30	4.09	4.09	3.14	0.00	Bit. Mac. 35.00
669-C	R. C. Huffman Construction Co.	27	Dade	12.00	12.00	12.00	12.00	0.00	S.T.R.B. 98.00
669-D	R. C. Huffman Construction Co.	27	Dade	12.31	1.31	9.23	9.23	0.00	S.T.R.B. 80.00
669-V	Wolfe & Alexander R. & K.	27	Collier	19.72	13.00	13.00	13.00	0.00	S.T.R.B. 70.00
669-W	State Convict Forces	27	Collier	15.40	15.40	15.40	15.40	15.40	S.T.R.B. 100.00
669-XZ	H. E. Wolfe Construction Co.	27	Collier	15.88			7.00	0.00	S.T.R.B. 40.00
669-Z	Alexander, Ramsey & Kerr	27	Collier	6.48	6.48	5.21			Graded 85.00
677-A	Duval Engr. & Contr. Co.	13	Levy	6.96			6.96	6.96	S.T.R.B. 100.00
677-C	Boone & Wester	13	Levy	10.16	10.16	9.95			Graded 98.00
677-D	N. B. Burton	13	Levy	3.05	3.00	2.44			Graded 80.00
677-D	Duval Engr. & Contr. Co.	13	Levy	8.91			0.00	0.00	S.T.R.B. 0.00
683-A	Robert G. Lassiter & Co.	4	Palm Beach	9.04	0.00	0.00			0.00 Concrete 0.00
685	Deen, Yarborough & Ebersbach	10	Franklin	18.46	18.46	16.61			Graded 91.00
695	Vadner & Tampa Sand & S. Co.	2	Lake	10.54	10.54	10.33			Graded 99.50
695	Rutherford Const. Co.	2	Lake	3.00			0.00	0.00	S.T.R.B. 0.00
706-A	Franklin Construction Co.	28	Putnam	11.85	11.85	11.61			Graded 98.00
706-B	Curry & Turner	28	Putnam	14.91	13.42	5.96			Graded 48.00
708	Hardee-Fisher Co., Inc.	11	Jefferson	7.98	7.10	3.59			Graded 55.00
709	C. G. Kershaw Contr. Co.	39	Holmes	9.09	0.00	0.00			Graded 0.00
710-A	Franklin Const. Co.	17	Hillsboro	6.18	0.00	0.00			Graded 0.00
710-C	E. F. Powers Const. Co.	17	Hillsboro	12.69	0.00	0.00			Graded 0.00
714	W. J. Bryson Paving Co.	28	Union	10.20	9.70	7.66			Graded 86.00
715	Sellers Construction Co.	28	Union	3.70	3.47	2.44			Graded 74.80
716	F. X. Bradley & Co.	28	Bradford	11.13	10.57	9.46			Graded 90.00
717	F. X. Bradley & Co.	28	Bradford	10.94	10.83	8.75			Graded 86.70
719	C. G. Kershaw Contr. Co.	5-A	Suwannee	8.57	8.57	8.57			Graded 100.00
720	Hardee-Fisher Co., Inc.	11	Jefferson	9.64	7.71	2.89			Graded 37.00
722	R. J. Carroll	48	Jefferson	8.83	7.00	2.21			Graded 20.00
723	L. B. McLeod Construction Co.	66	Leon	11.76	6.47	5.17			Graded 47.00
726	State Convict Forces	19	Dixie	12.57	4.00	1.20			Graded 15.00
728	State Convict Forces	10	Leon	11.65	10.02	7.57			Graded 61.70
732	Gilbert & Hadsack	17	Polk	8.94	0.00	0.00			Graded 0.00
736	C. G. Kershaw Const. Co.	39	Holmes	8.58	0.00	0.00			Graded 0.00
740	State Convict Forces	10	Gulf	9.63	9.63	9.63			Graded 88.00
742	Little & Lee	13	Alachua	7.65	7.65	6.50			Graded 87.20
743	State Convict Forces	10	Bay	18.25	17.33	16.60			Graded 73.00
744	State Convict Forces	19	Madison	5.79	3.00	2.00			Graded 30.00
745	Convicts and Taylor County	19	Taylor	15.95	8.77	5.74			Graded 33.10
748	State Convict Forces	35	Madison	6.22	6.00	3.00			Graded 53.00
749	State Convict Forces	14	Gilchrist	6.75	2.00	.50			Graded 8.00
750	State Convict Forces	14	Gilchrist	12.97	0.00	0.00			Graded 0.00
755	B. Booth	17	Polk	11.22	0.00	0.00			Graded 0.00
757	Little & Lee	2	Polk	10.26	0.00	0.00			Graded 0.00
758	Little & Lee	2	Polk	8.34	0.00	0.00			Graded 0.00
763	A. E. Campbell	50	Suwannee	12.23	9.99	7.65			Graded 64.80
764	F. W. Simpson	50	Suwannee	12.00	12.00	10.92			Graded 90.00
765	F. W. Simpson	50	Suwannee	7.00	6.96	6.19			Graded 86.83
786	State Convict Forces	52	Jackson	6.76	6.76	6.76			Graded 95.88
827	S. G. Collins	50	Escambia	8.12	0.00	0.00			Graded 0.00
Total Complete January 31, 1928.				2430.24	2344.97	1147.87	1807.46		
Complete Month of January				30.28	47.78	13.03	7.84		
Total Complete December 31, 1927.				2399.96	2297.19	1134.84	1799.62		

TOTAL MILEAGE COMPLETE

Concrete	Brick	B. C.	S. A.	B. M.	Asph. Block	S.T.R.B.	S.T.S.C.	S. C.	Marl	Total	
Complete to December 31, 1927.....	243.97	17.13	36.28	93.51	103.46	23.20	871.93	166.66	257.04	27.58	1840.76
Complete month of January.....	0.00	0.00	0.00	1.49	1.66	0.00	6.96	.80	0.00	0.00	10.91
Complete to January 31, 1928.....	243.97	17.13	36.28	95.00	105.12	23.20	878.89	167.46	257.04	27.58	1851.67

Attention Contractors!

We have just purchased four carloads of material used in construction work, consisting of several hundred items, always used by contractors and construction companies. This material was used on one job and is all in good condition. We mention below a partial list of items and can save you money on them while they last.

ANVILS	PIPE
AXES	PIPE FITTINGS
AUGERS	PIPE TOOLS
AIR HOSE	PIPE VISES
BLOCKS	PINCH BARS
BITS	PEAVIES
BOLTS	PACKING
BARS	RAILS
BOILER FLUES	STEAM HOSE
BLOWERS	SWITCH LIGHTS
CANT HOOKS	SPIKES
DRILL PRESSES	SAWS
FORGES	TOOLS
FLOOD LIGHTS	TRACK TOOLS
GRAB HOOKS	TORCHES
HAND TRUCKS	VISES
JACKS	VALVES
LANTERNS	WIRE ROPE

Also Other Items too Numerous to List.

Sabel & Rothschild, Inc.
JACKSONVILLE FLORIDA

HERCULES DYNAMITE

Blasting Supplies

Write or Phone us for Prices

We Deliver Promptly by Truck

Florida Dynamite Company
BARTOW

White Johns & Company
DUNNELLON

*High
Early
Strength*
CEMENT

"We Needed Just Such
a Cement as Yours"

Prompt shipments! Not a minute's delay. High Early Strength! 8 miles of concrete laid with



in 75 calendar days.

There you have the reasons why Mr. Bryson says "we were working very fast and needed just such a cement as yours." Phoenix saves time, labor, money—costs no more than other Portland Cement.

Phoenix Portland Cement Corp.
Alabama Power Bldg. Birmingham

WALTER J. BRYSON, PRESIDENT
WALTER J. BRYSON, JR., VICE-PRES.

WALTER J. BRYSON PAVING CO., INC.
GENERAL CONTRACTORS
MAIN OFFICE
JACKSONVILLE, FLORIDA

PHOENIX PORTLAND CEMENT CORP.
BIRMINGHAM, ALA.

Gentlemen:

We were awarded a contract of approximately eight miles of standard width concrete road by the State Highway Department of Georgia, in May 1927. We started to laying concrete on this project June 14, 1927, and completed same August 31, 1927. This road is between the towns of Sadley and Louisville, Georgia.

We were approached by many cement salesman to sell us cement for this project, but after due deliberation we decided to use your product. We used 21,000 barrels all of which arrived in fine shape. We did not have to make up for a single sack. We also got a wonderful credit on sacks and loss less than two per cent. We think this an extremely fine return and we credit this mostly to the wonderful condition in which they arrived.

Another great item which enabled us to make extra time was the efficient manner in which you made shipment, as we were only delayed fifteen minutes for material on the entire job, and that was no fault of yours.

Your product came up to every requirement of the specification, and as we were working very fast we needed just such a cement as yours. We wish to say there is no cement on the market, in our opinion, that is superior to yours, and we know your service cannot be excelled. It has been a great pleasure to us to have done business with such a firm as yours. The personnel of your office are extremely accommodating and obliging.

We believe this road has received as many complimentary remarks from those who know, as any road in Georgia.

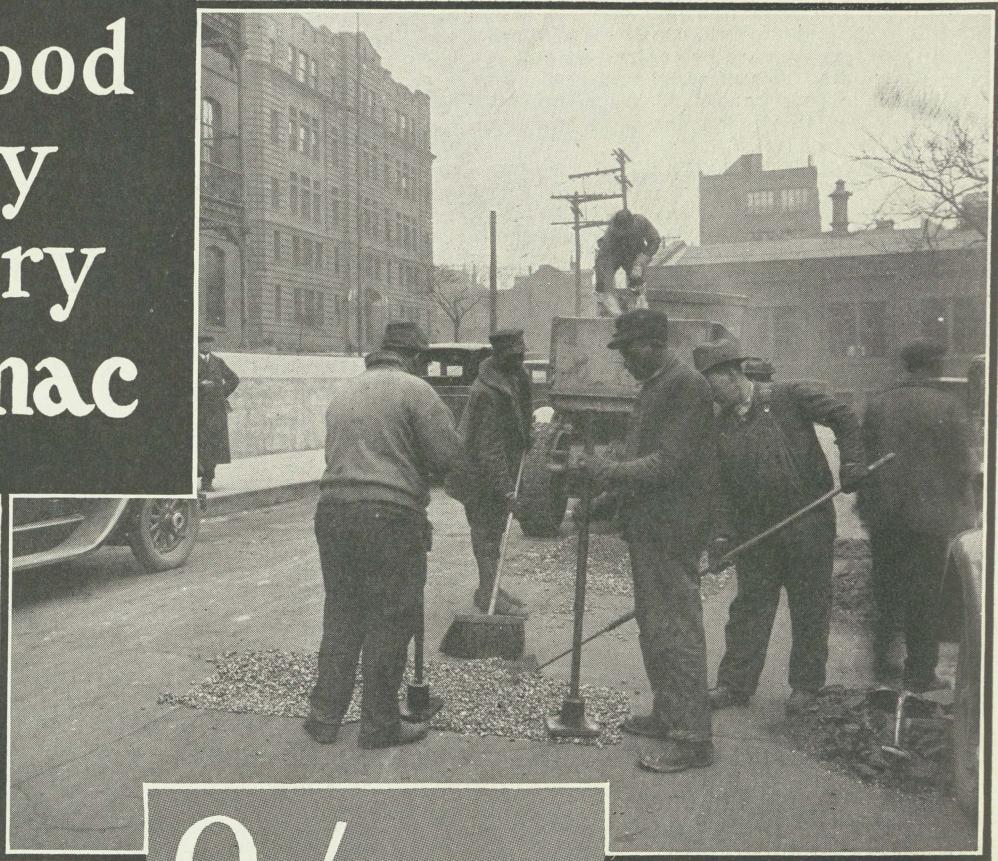
You are now serving us on our Alabama work, and we have no cause for complaint, we believe our road here as good if not better than the one in Georgia, which is hard to say.

We wish to say as long as you manufacture this good product and give the service you are giving you will always get your share of our business.

Yours very truly,
Walter J. Bryson Paving Co.
A.C. Bryson

A good way to try Tarmac

Tarmac Cold Patching in winter. Note how little equipment is needed. (Photograph taken January 24, 1928, in Pittsburgh.)



IF you have never used Tarmac, here is one way you can try it out and see for yourself what it can do—

Order a few barrels of Tarmac CP and use it in patching up the holes that winter has made in your roads and streets.

One barrel will make enough mix to fill 50 square yards of holes 2 inches deep. The patching is simple. You merely mix Tarmac CP with aggregate and tamp it into the hole. That is all.

Other grades of Tarmac for Cold and hot surface treating Penetration macadam binder. Crack filler, etc.

This gravel road in Oconto County, Wis., surface treated with Tarmac P.



Tarmac

MAKES GOOD ROADS

T. J. APPLEYARD, INC., TALLAHASSEE, FLORIDA

Order a few barrels for patching

Tarmac CP is made with a special cut-back that makes mixing easy, makes a patch set up fast when put in the road, and leaves a high percentage of bitumen in the patch to bind the particles of aggregate together.

If you prefer to use hot patching materials, Tarmac HP is the ideal material for the purpose. It requires a minimum amount of heating and makes a smooth surface that wears well.

AMERICAN TAR PRODUCTS COMPANY
Union Trust Building, Pittsburgh, Pa.

New England Division: Tar Products Corporation, Providence, R. I.

FLORIDA REPRESENTATIVE

M. D. MOODY

402 Masonic Building Jacksonville, Fla.

American Tar Products Co.,
326 Union Trust Bldg., Pittsburgh, Pa.

Send me prices on _____ bbls. of Tarmac CP
 Tarmac HP

Name _____ Title _____

Address _____

City _____ State _____